April 5, 2017

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Street
New Britain, CT 06051

Regarding:	Notice of Exempt Modification –Antenna Swap & Remote Radio Head Installation
Property Address:	22 Titicus Mountain Road, New Fairfield, CT 06812-2565
AT&T Site:	CT5534

Dear Ms. Bachman:

AT&T currently maintains a wireless telecommunications facility on an existing 155 foot self-support tower at the above-referenced address, latitude 41.450700, longitude -73.516000. Said self-support is owned by American Tower Corporation. The existing equipment shelter is 12' by 20', totaling 240 square feet.

AT&T desires to modify its existing telecommunications facility by swapping (3) antennas and adding (3) remote radio heads ("RRH"). The centerline height of said antennas is and will remain at 160 feet. Antennas are mounted utilizing a sector frame.

Please accept this application as notification pursuant to R.C.S.A. §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16-50j-72 (b)(2). In accordance with R.C.S.A. §16-50j-73, a copy of this letter is being sent to Susan Chapman, First Selectman of the Town of New Fairfield, as well as to Evan White, Zoning Enforcement Officer. A copy of this letter is also being sent to the land owners Brandon and Jade Karow, and to the tower owner American Tower Corporation.

The planned modifications to AT&T's facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72 (b)(2). Specifically:

1. The planned modification will not result in an increase in the height of the existing structure. The antennas to be swapped will be installed at the existing height of 160 feet on the 187.5-foot self-support tower.

2. The proposed modifications will not involve any changes to ground-mounted equipment, and therefore will not require an extension of the site boundary.

3. The proposed modification will not increase the noise level at the facility by six decibel or more, or to levels that exceed state and local criteria.

Sarah Snell • Empire Telecom USA, LLC • 16 Esquire Road Billerica, MA 01862 • 978-608-8416 • ssnell@empiretelecomm.com

4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above Federal Communications Commission (FCC) safety standard. An RF emissions calculation (attached) for AT&T's modified facility is herein provided.

5. The proposed modifications will not case a change or alteration in the physical or environmental characteristics of the site.

6. The self-support tower and its foundation can support AT&T's proposed modifications (please see attached structural analysis completed by American Tower dated April 3, 2017).

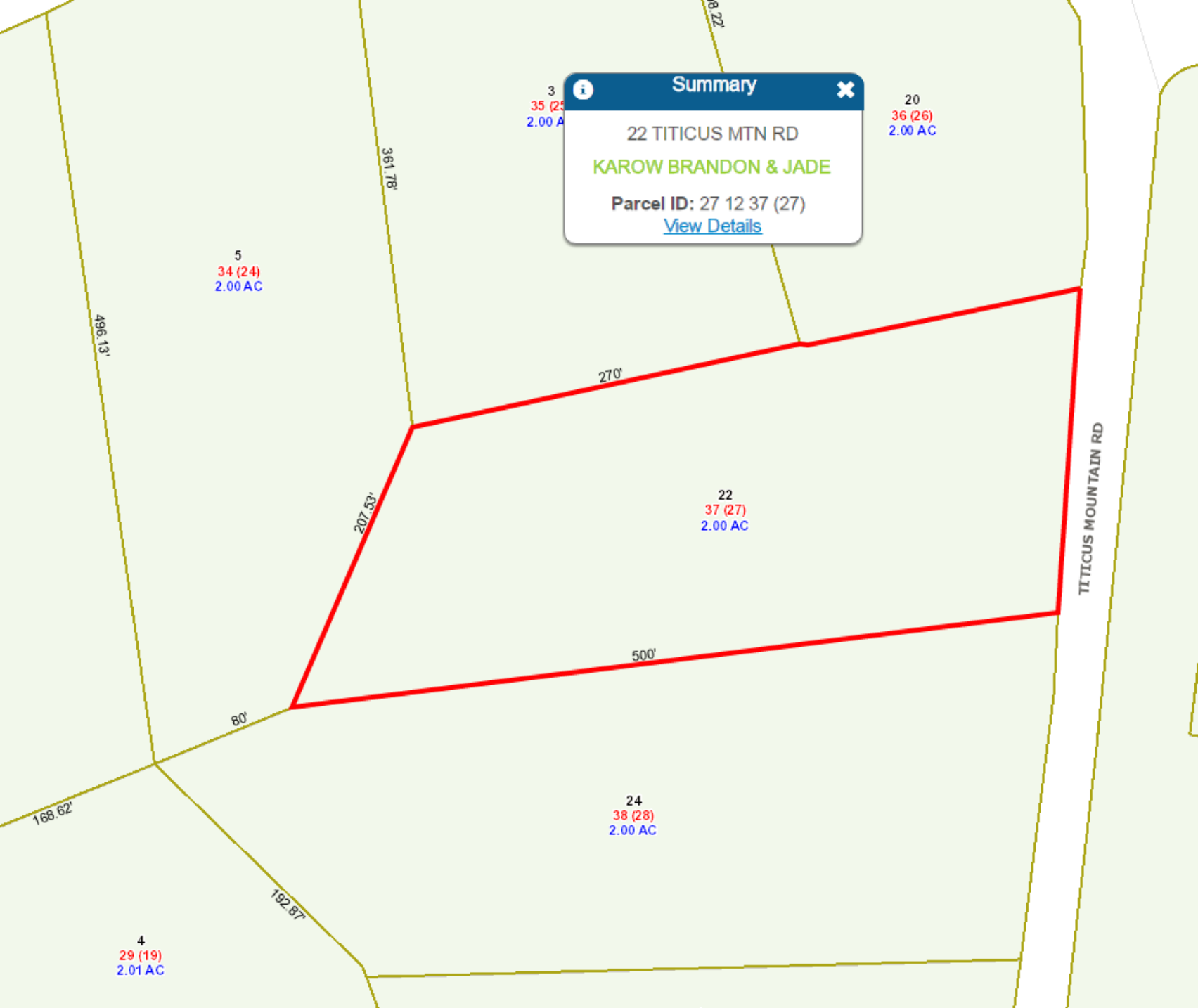
For the foregoing reasons, AT&T respectfully requests that the proposed antenna swap and RRH installation be allowed within the exempt modifications under R.C.S.A. §16-50j-72 (b)(2).

Sincerely,

Sarah Snell

Sarah Snell
Site Acquisition Specialist

cc: Susan Chapman, First Selectman of the Town of New Fairfield (municipality)
Evan White, Zoning Enforcement Officer
Brandon and Jade Karow (landowners)
American Tower Corporation (tower owner)


Summary
22 TITICUS MTN RD
KAROW BRANDON & JADE
Parcel ID: 27 12 37 (27)
View Details
3
35 (25)
2.00 AC
20
36 (26)
2.00 AC
5
34 (24)
2.00 AC
22
37 (27)
2.00 AC
24
38 (28)
2.00 AC
4
29 (19)
2.01 AC
361.78'
496.13'
270'
207.53'
500'
80'
168.62'
192.87'
TITICUS MOUNTAIN RD

22 TITICUS MTN RD

Location	22 TITICUS MTN RD	**Mblu**	27/ 12/ 37/ /
Acct#	00581100	**Owner**	KAROW BRANDON & JADE
Assessment	$382,600	**Appraisal**	$546,500
PID	5843	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$377,400	$169,100	$546,500
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$264,200	$118,400	$382,600

Owner of Record

Owner	KAROW BRANDON & JADE	**Sale Price**	$475,000
Co-Owner		**Certificate**	1
Address	22 TITICUS MTN RD NEW FAIRFIELD, CT 06812	**Book & Page**	500/0035
		Sale Date	03/31/2014
		Instrument	18

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
KAROW BRANDON & JADE	$475,000	1	500/0035	18	03/31/2014
PIERLEONI GREGG+JOANNE	$0		266/ 317		10/30/1996

Building Information

Building 1 : Section 1

Year Built:	1981
Living Area:	4,104
Replacement Cost:	$463,926
Building Percent Good:	74

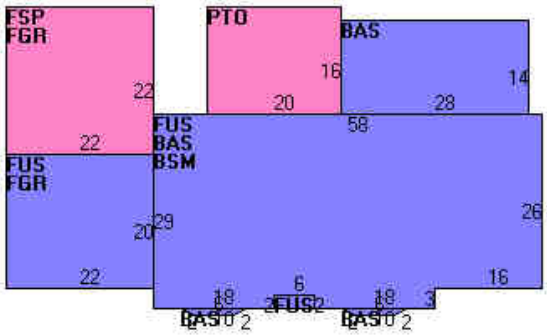
Replacement Cost
Less Depreciation: $343,300

Building Attributes	
Field	**Description**
Style	Colonial
Model	Residential
Grade:	B+
Stories:	2
Occupancy	1 Family
Exterior Wall 1	Vinyl
Exterior Wall 2	
Roof Structure:	Mansard
Roof Cover	Asphalt Shngl.
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Flr 1	Hardwood
Interior Flr 2	
Heat Fuel	Oil
Heat Type:	Forced Air-Duc
AC Type:	Central
Total Bedrooms:	5 Bedrooms
Full Bathrms:	3
Half Baths:	1
Total Rooms:	12
Bath Style	
Kitchen Style	
Fireplaces	1
Bsmt Garage	
Fin Bsmt Area	850
Fin Bsmt Qual	FRB/FBM
Func Code	
Eco Code	

Building Photo

(http://images.vgsi.com/photos/NewFairfieldCTPhotos//\00\00\3

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
FUS	Finished Upper Story	2,074	2,074
BAS	First Floor	2,030	2,030
BSM	Basement	1,622	0
FGR	Garage	924	0
FSP	Screened Porch	484	0
PTO	Patio	320	0
		7,454	4,104

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	101
Description	Single Family
Zone	2
Neighborhood	60
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	2
Depth	
Assessed Value	$118,400
Appraised Value	$169,100

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
SPL	Pool	G	Gunite	800 S.F.	$33,100	1
PAT1	Patio - Ave			392 S.F.	$1,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$377,400	$169,100	$546,500
2014	$377,400	$169,100	$546,500
2013	$452,500	$185,100	$637,600

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$264,200	$118,400	$382,600
2014	$264,200	$118,400	$382,600
2013	$316,800	$129,600	$446,400

PROJECT INFORMATION

SCOPE OF WORK	UNMANNED COMMUNICATIONS FACILITY MODIFICATIONS INCLUDING THE REPLACEMENT OF EXISTING (3) LTE PANELS WITH NEW (3) CCI HPA65RBUUH6 PANELS WITH THE ADDITION OF NEW ERICSSON RRUS-32B2 UNITS, RE-USE EXISTING (1) FIBER TRUNK, EXISTING (2) DC TRUNKS, EXISTING (1) RAYCAP SURGE ARRESTOR AND ASSOCIATED JUMPER CABLES.
SITE NUMBER:	CT5534
SITE NAME:	NEW FAIRFIELD SW
SITE ADDRESS:	16 TITICUS MOUNTAIN ROAD NEW FAIRFIELD, CT 06812
TOWER OWNER:	AMERICAN TOWER CORPORATION 116 HUNTINGTON AVE. 11th FLOOR BOSTON, MA 02116
APPLICANT:	AT&T MOBILITY 550 COCHITUATE RD SUITES 13 & 14 FRAMINGHAM, MA 01701
NOC CONTACT:	TEL 866-915-5600
COORDINATES	LAT. N41°27'03.2" LONG. W73°30'57.9"
GROUND LEVEL:	±899'
DEED REFERENCE:	N/A
SITE PARCEL NO.:	N/A
CURRENT ZONING:	N/A
HORIZONTAL DATUM:	(NAD) 1983

DRAWING INDEX

		REV
01	TITLE SHEET	0
02	NOTES	0
03	SITE PLAN & EQUIPMENT PLAN	0
04	ELEVATION VIEW & ANTENNA LAYOUT	0
05	GROUNDING DETAILS	0

ONE CALL 1-800-922-4455

AT LEAST 2 WORKING DAYS PRIOR TO DIGGING, THE CONTRACTOR IS REQUIRED TO CONNECTICUT ONE CALL SYSTEM AT 1-800-922-4455

CONTACT & UTILITY INFORMATION

CONTACT	CONTACT	COMPANY	PHONE NO.
ENGINEERING:	MIGUEL NOBRE	VRG	(508) 981-9590
SITE ACQUISITION:	DAVID COOPER	EMPIRE	(484) 683-5349
CONSTRUCTION:	BILL DANIELS	EMPIRE	(484) 683-5349
UTILITIES			
POWER:	WORK REQUEST GROUP	NATIONAL GRID	(800) 375-7405
TELCO:	.	VERIZON	(800) 941-9900

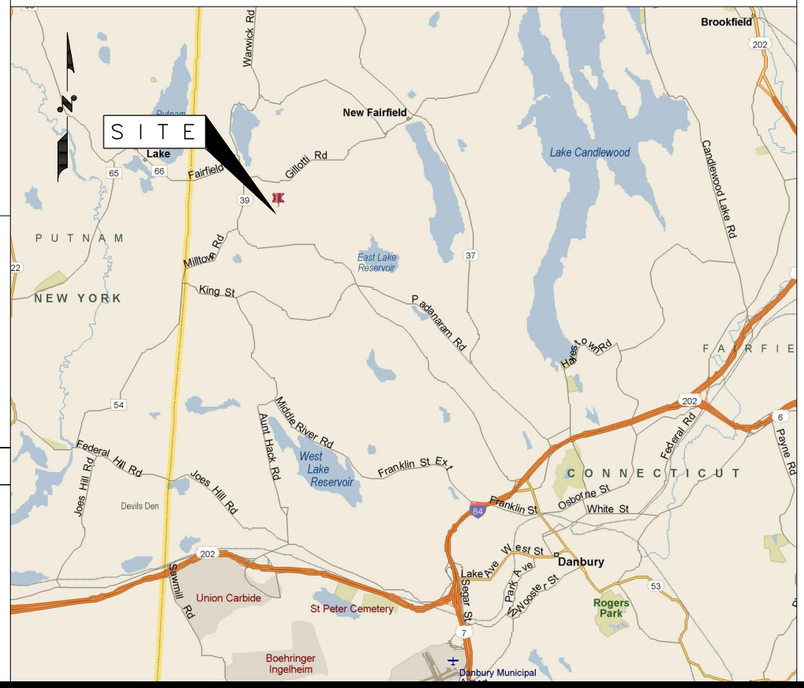
at&t Mobility

SITE NUMBER: CT5534
SITE NAME: NEW FAIRFIELD SW
PROJECT: LTE 2C 1900

LOCATION MAP

DIRECTIONS: FROM ROCKY HILL, TAKE I-91 SOUTH. TAKE EXIT 18, PROCEED WEST ON I-691. CONTINUE ON I-84 WEST. TAKE I-84 WEST EXIT 6. PROCEED NORTH ON CT RT-37 NORTH (PADANARAM RD). CONTINUE ON PEMBROKE RD (RT-37). TURN LEFT ON PADANARAM RD. TURN RIGHT ONTO BALL POND ROAD. TURN RIGHT ONTO TITICUS MOUNTAIN ROAD. SITE WILL BE ON LEFT

SITE ACCESS: LOCKED GATE



APPLICABLE BUILDING CODES AND STANDARDS

SUBCONTRACTOR'S WORK SHALL COMPLY WITH PROJECT STANDARDS AND SPECIFICATIONS. SUBCONTRACTOR WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE:
CONNECTICUT STATE BUILDING CODE

ELECTRICAL CODE:
NATIONAL ELECTRICAL CODE LATEST EDITION
SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS.
AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
AMERICAN NATIONAL STANDARDS INSTITUTE/TELECOMMUNICATIONS INDUSTRY ASSOCIATION (ANSI/TIA) 222-F OR G AS APPLICABLE, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES:
TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM
IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT

IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")

TELCORDIA GR-1503, COAXIAL CABLE CONNECTIONS

ANSI T1.311, FOR TELECOM – DC POWER SYSTEMS – TELECOM, ENVIRONMENTAL PROTECTION

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

VRG
VERTICAL RESOURCES GRP.
489 Washington Street
Auburn, MA 01501
Tel. (508) 981- 9590
Fax (508) 519 – 8939
mnobre@verticalresourcesgrp.com

EMPIRE telecom
EMPIRE TELECOM USA, LLC
16 ESQUIRE ROAD
BILLERICA, MA 01821

SITE NUMBER: CT5534
SITE NAME: NEW FAIRFIELD SW
PROJECT: LTE 2C 1900

16 TITICUS MOUNTAIN ROAD
NEW FAIRFIELD, CT 06812
FAIRFIELD COUNTY

at&t Mobility
550 COCHITUATE RD
SUITES 13 & 14
FRAMINGHAM, MA 01701

NO.	DATE	REVISION	BY	CHK	APP'D
0	02/22/17	FOR CONSTRUCTION	E.L.P.	G.A.M.	

SCALE | DESIGNED BY: M.N. | DRAWN BY: G.A.M.

STATE OF CONNECTICUT JAMES P. STRUKE No. 8657 REGISTERED PROFESSIONAL ENGINEER

AT&T MOBILITY

TITLE SHEET

JOB NUMBER	DRAWING NUMBER	REV
50-145	01	0

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR – PRIME CONTRACTOR
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – AT&T WIRELESS
   OEM – ORIGINAL EQUIPMENT MANUFACTURER

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

4. DRAWINGS PROVIDED HERE ARE NOT TO SCALE UNLESS OTHERWISE NOTED AND ARE INTENDED TO SHOW OUTLINE ONLY.

5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

6. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

7. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.

8. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. ROUTING OF CONDUIT FOR POWER AND TELCO SHALL BE APPROVED BY OWNER OF SITE.

9. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

10. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

11. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

SITE WORK GENERAL NOTES

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.

2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.

3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.

4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES, TOP SOIL AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

5. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.

6. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.

7. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE OWNER SPECIFICATION FOR SITE SIGNAGE.

8. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE TRANSMISSION EQUIPMENT AND TOWER AREAS.

9. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

10. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION, SEE DETAIL 303.

11. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.

12. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL JURISDICTION'S GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

13. ALL EARTH WORK SHALL BE PERFORMED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 (HOT–DIP) UNLESS NOTED OTHERWISE. STRUCTURAL STEEL SHALL BE ASTM–A–36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE PERFORMED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".

2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.

3. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. STEEL FASTENER HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 (HOT–DIP)

4. NON–STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.

5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD, HILTI OR APPROVED EQUAL.

6. ALL STRUCTURAL STEEL SHALL BE SUPPLIED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST–IN–PLACE CONCRETE.

2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (4000 PSI) MAY BE USED.

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.

4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:

   #6 AND LARGER .....2 INCH
   #5 AND SMALLER & WWF.....1 1/2 INCH

   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:

   SLAB AND WALL .....3/4 INCH
   BEAMS AND COLUMNS.....1 1/2 INCH

5. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD HILTI OR APPROVED EQUAL.

7. CONCRETE CYLINDER TEST IS NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC 1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
   (A) RESULTS OF CONCRETE CYLINDER TESTS PERFORMED AT THE SUPPLIER'S PLANT,

   (B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.

   FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.

8. AS AN ALTERNATIVE TO ITEM 7, TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.

9. EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

10. ALL CONCRETE SHALL BE SUPPLIED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL, EXPOSE UNDISTURBED NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.

2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.

3. AS AN ALTERNATIVE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.

4. COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING 1" SIEVE.

5. AS AN ALTERNATIVE TO ITEMS 2 AND 3 PROOF ROLL THE SUBGRADE SOILS WITH 5 PASSES OF A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND–OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). ANY SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL–GRADED GRANULAR FILL, AND COMPACTED AS STATED ABOVE.

6. COMPACTION CRITERIA FOR OTHER FILL AREAS ON SITE SHALL MEET THE SAME REQUIREMENTS AS NOTED ABOVE.

7. SOIL COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

COMPACTION EQUIPMENT:

HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

ELECTRICAL INSTALLATION NOTES

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.

2. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.

4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.

5. CABLES SHALL NOT BE ROUTED THROUGH LADDER–STYLE CABLE TRAY RUNGS.

6. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA.

7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH PERMANENT LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S). NO HAND WRITTEN LABELS ALLOWED.

8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED. NO HAND WRITTEN LABELS ALLOWED.

9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.

10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (SIZE 14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (SIZE 6 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN–2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

12. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (SIZE 14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.

13. ALL POWER AND POWER GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).

14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.

ELECTRICAL INSTALLATION NOTES (cont.)

15. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

16. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

17. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.

18. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.

19. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

20. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.

21. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.

22. WIREWAYS SHALL BE EPOXY–COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

23. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS

24. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED, OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

25. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

26. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

27. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

VRG
VERTICAL RESOURCES GRP.
489 Washington Street
Auburn, MA 01501
Tel. (508) 981– 9590
Fax (508) 519 – 8939
mnobre@verticalresourcesgrp.com

EMPIRE telecom
EMPIRE TELECOM USA, LLC
16 ESQUIRE ROAD
BILLERICA, MA 01821

SITE NUMBER: CT5534
SITE NAME: NEW FAIRFIELD SW
PROJECT: LTE 2C 1900

16 TITICUS MOUNTAIN ROAD
NEW FAIRFIELD, CT 06812
FAIRFIELD COUNTY

at&t Mobility
550 COCHITUATE RD
SUITES 13 & 14
FRAMINGHAM, MA 01701

NO.	DATE	REVISION	BY	CHK	APP'D
0	02/22/17	FOR CONSTRUCTION	E.L.P.	G.A.M.	

SCALE | DESIGNED BY: M.N. | DRAWN BY: G.A.M.

STATE OF CONNECTICUT
JAMES P. SUTPHEN
No. 8657
REGISTERED PROFESSIONAL ENGINEER

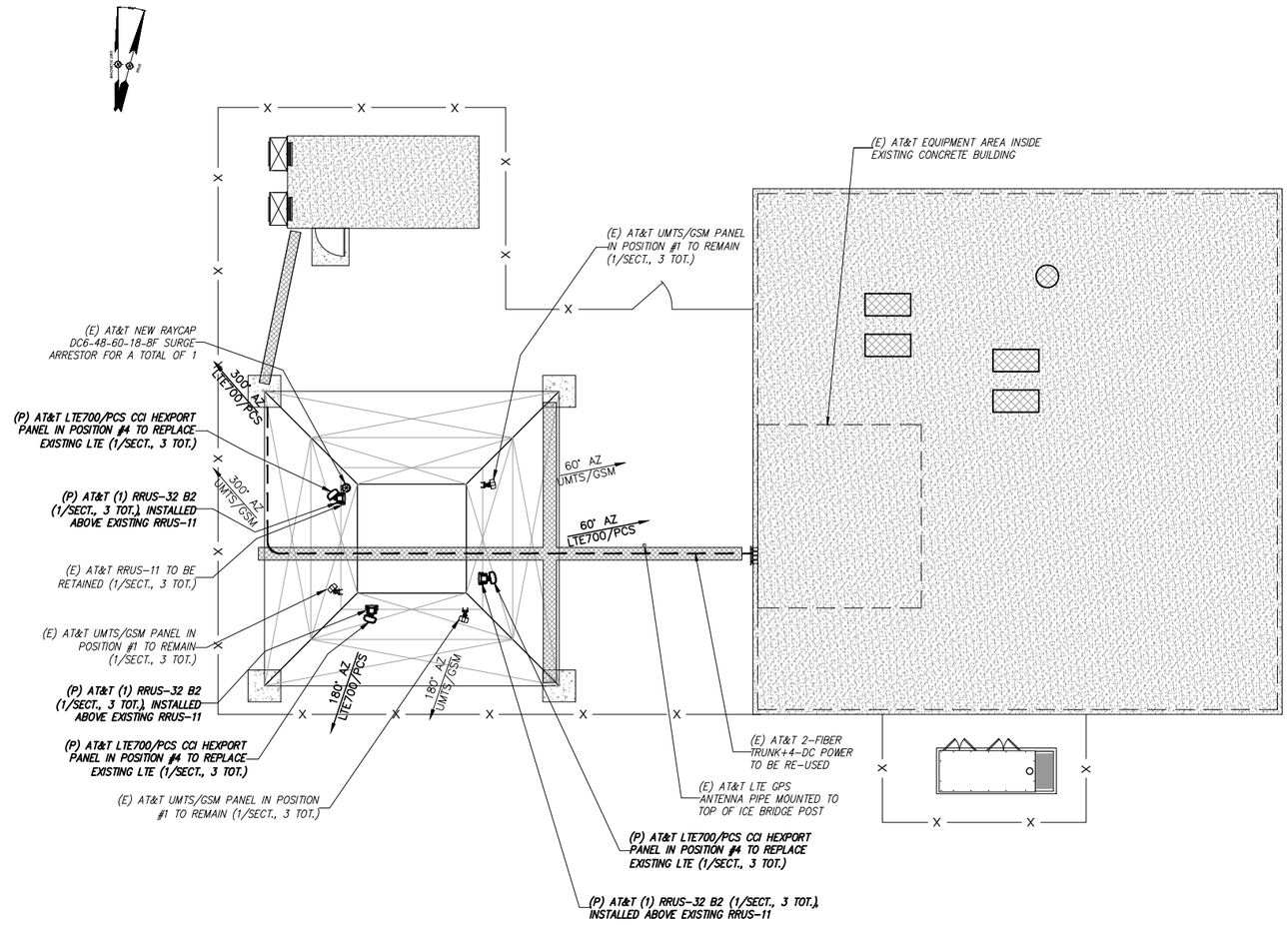
AT&T MOBILITY

NOTES

JOB NUMBER	DRAWING NUMBER	REV
50–145	02	0

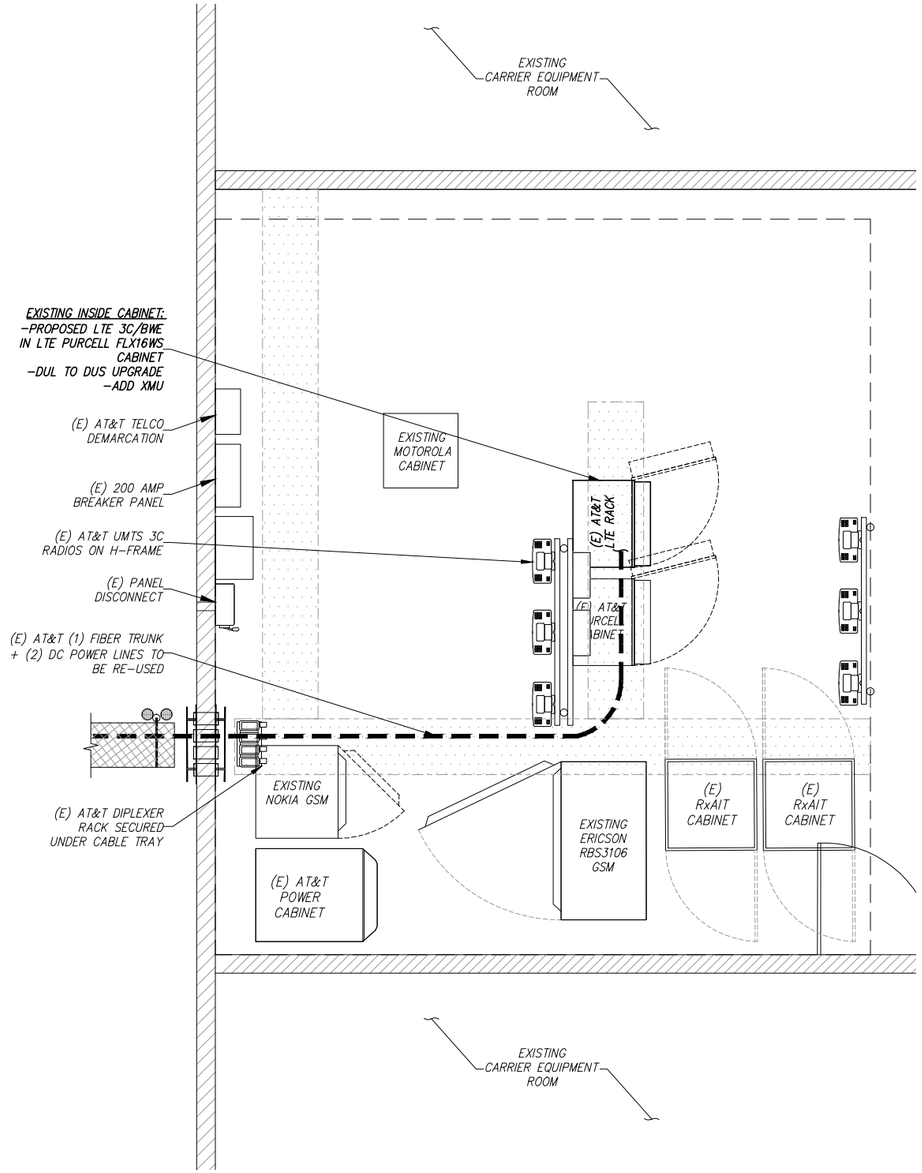
GENERAL NOTES

1. THE TYPE, DIMENSIONS, MOUNTING HARDWARE, AND THE POSITIONS OF ALL EQUIPMENT IN THE COMPOUND ARE SHOWN IN ILLUSTRATIVE FASHION. THESE DRAWINGS ARE NOT INTENDED FOR CONSTRUCTION. ACTUAL HARDWARE DETAILS AND FINAL LOCATIONS MAY DIFFER SLIGHTLY FROM WHAT IS SHOWN.
2. THE CELLULAR INSTALLATION IS AN UNMANNED PRIVATE AND SECURED COMPOUND. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONSTRUCTION, MAINTENANCE & OPERATION OF PROPOSED TOWER FACILITY WILL BE HELD IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE & FEDERAL REGULATIONS AND GUIDELINES.



COMPOUND PLAN 1/03
SCALE: 1" = 8'

GRAPHIC SCALE
8 0 4 8 16 32
(IN FEET)
1 inch = 8 ft.



EQUIPMENT PLAN 2/03
SCALE: 1" = 2'

VRG
VERTICAL RESOURCES GRP.
489 Washington Street
Auburn, MA 01501
Tel. (508) 981- 9590
Fax (508) 519 - 8939
mnobre@verticalresourcesgrp.com

EMPIRE telecom
EMPIRE TELECOM USA, LLC
16 ESQUIRE ROAD
BILLERICA, MA 01821

SITE NUMBER: CT5534
SITE NAME: NEW FAIRFIELD SW
PROJECT: LTE 2C 1900
16 TITICUS MOUNTAIN ROAD
NEW FAIRFIELD, CT 06812
FAIRFIELD COUNTY

at&t Mobility
550 COCHITUATE RD
SUITES 13 & 14
FRAMINGHAM, MA 01701

NO.	DATE	REVISION	BY	CHK	APP'D
0	02/22/17	FOR CONSTRUCTION	E.L.P.	G.A.M.	

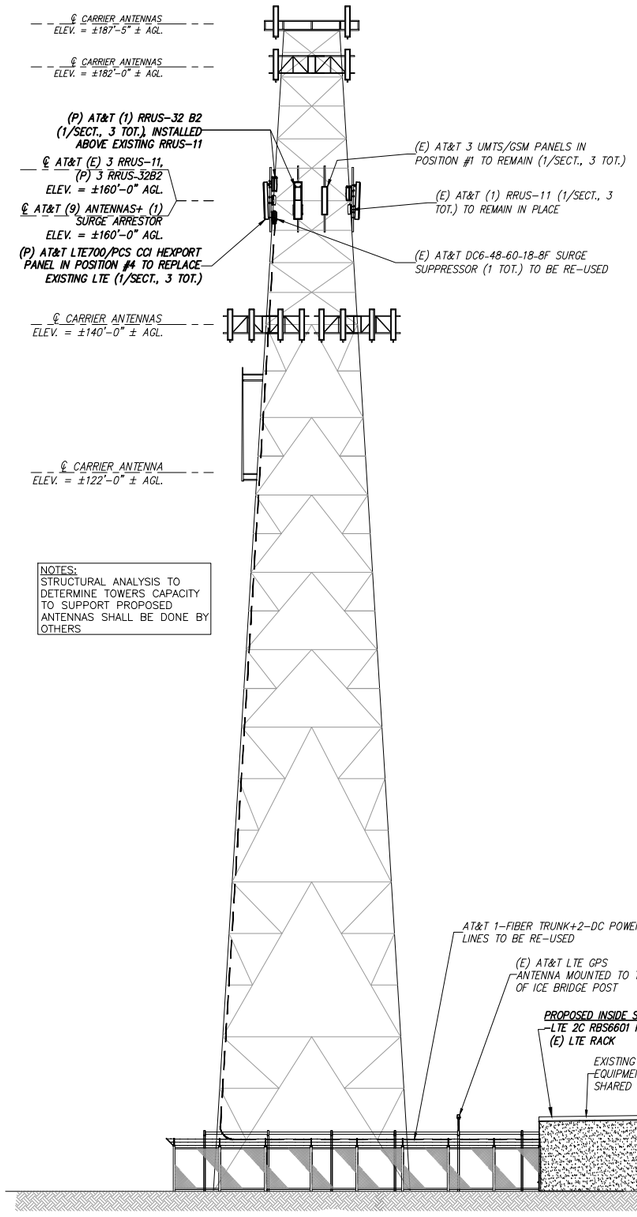
SCALE | DESIGNED BY: M.N. | DRAWN BY: G.A.M.

STATE OF CONNECTICUT
JAMES P. STROKE
No. 6657
REGISTERED PROFESSIONAL ENGINEER

AT&T MOBILITY

SITE PLAN & EQUIPMENT PLAN

JOB NUMBER	DRAWING NUMBER	REV
50-145	03	0

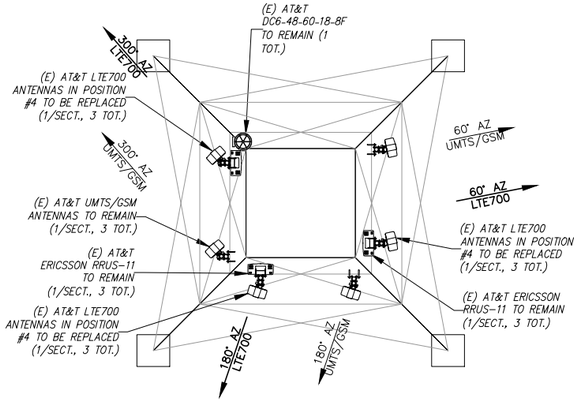


NOTES:
STRUCTURAL ANALYSIS TO DETERMINE TOWERS CAPACITY TO SUPPORT PROPOSED ANTENNAS SHALL BE DONE BY OTHERS

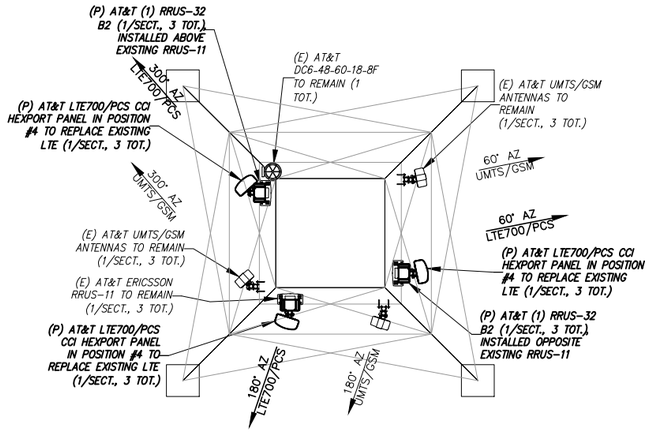
ELEVATION VIEW 1/04
SCALE: 1" = 12'

GRAPHIC SCALE
12 0 6 12 24 48
(IN FEET)
1 inch = 12 ft.

NOTES:
REFER TO FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS AND CONFIGURATIONS

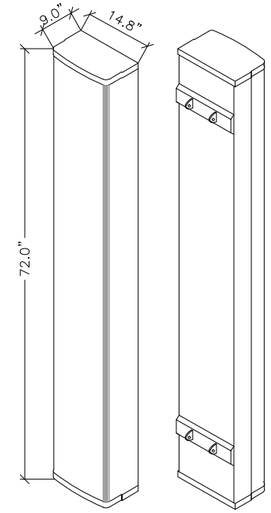


EXISTING



PROPOSED

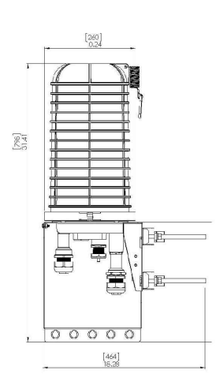
ANTENNA MOUNTING PLAN VIEW 2/04
SCALE: N.T.S.



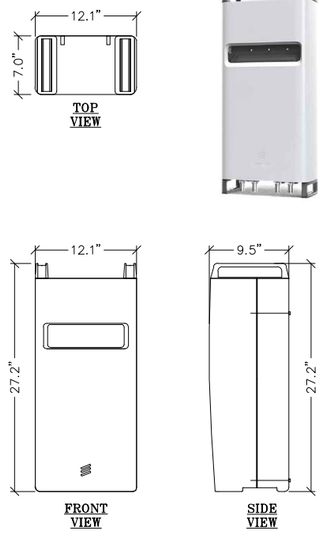
ISOMETRIC FRONT VIEW

ISOMETRIC REAR VIEW

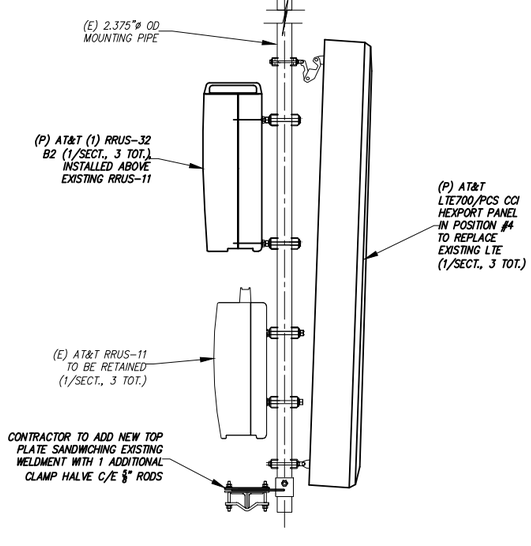
LTE CCI HEXPORT PANEL ANTENNA 3/04
SCALE: N.T.S.



RAYCAP SURGE SUPPRESSOR DC64860188F 5/04
SCALE: N.T.S.



PROPOSED ERICSSON DUAL PA RRH 6/04
SCALE: N.T.S.



PROPOSED RRH & SURGE ARRESTOR MOUNTING DETAIL 6/04
SCALE: N.T.S.

VRG
VERTICAL RESOURCES GRP.
489 Washington Street
Auburn, MA 01501
Tel. (508) 981- 9590
Fax (508) 519 - 8939
mnobre@verticalresourcesgrp.com

EMPIRE telecom
EMPIRE TELECOM USA, LLC
16 ESQUIRE ROAD
BILLERICA, MA 01821

SITE NUMBER: CT5534
SITE NAME: NEW FAIRFIELD SW
PROJECT: LTE 2C 1900

16 TITICUS MOUNTAIN ROAD
NEW FAIRFIELD, CT 06812
FAIRFIELD COUNTY

at&t Mobility
550 COCHITUATE RD
SUITES 13 & 14
FRAMINGHAM, MA 01701

NO.	DATE	REVISION	BY	CHK	APP'D
0	02/22/17	FOR CONSTRUCTION	E.L.P.	G.A.M.	

SCALE | DESIGNED BY: M.N. | DRAWN BY: G.A.M.

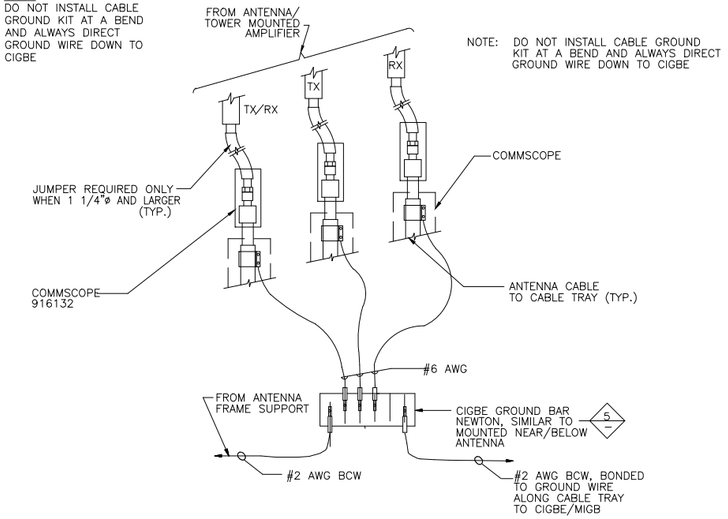
STATE OF CONNECTICUT JAMES P. STROPE No. 8657 REGISTERED PROFESSIONAL ENGINEER

AT&T MOBILITY

ELEVATION VIEW & ANTENNA LAYOUT

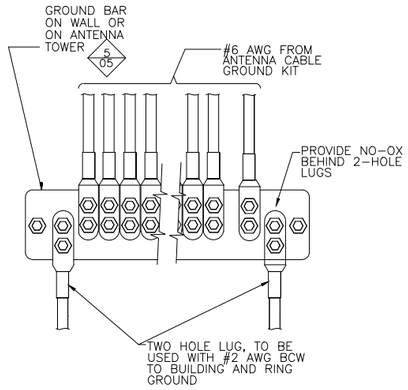
JOB NUMBER	DRAWING NUMBER	REV
50-145	04	0

NOTE:
DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE



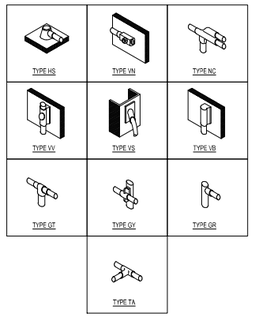
CONNECTION OF GROUND WIRES TO GROUNDING BAR (CIGBE) 1/05

SCALE: N.T.S.



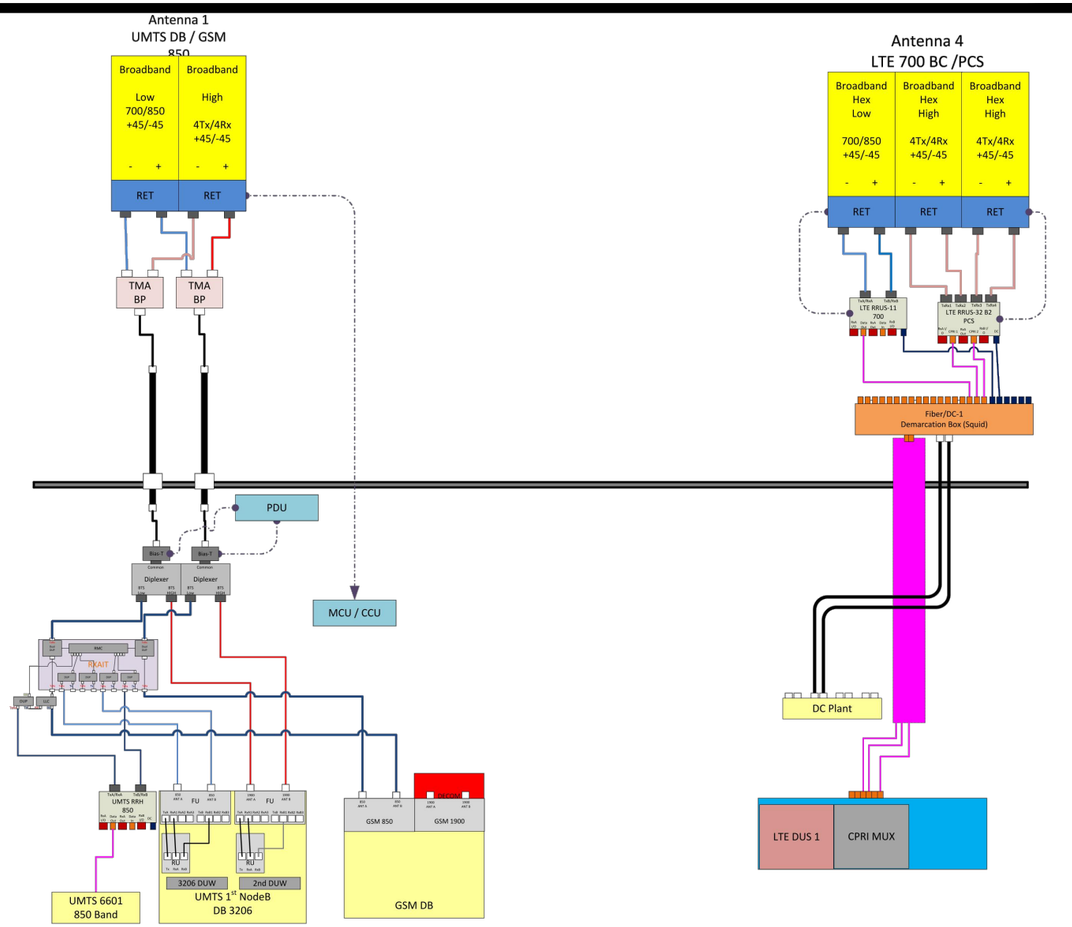
INSTALLATION OF GROUND WIRE TO GROUND BAR 2/05

SCALE: N.T.S.



GROUNDING CONNECTION DETAIL 5/05

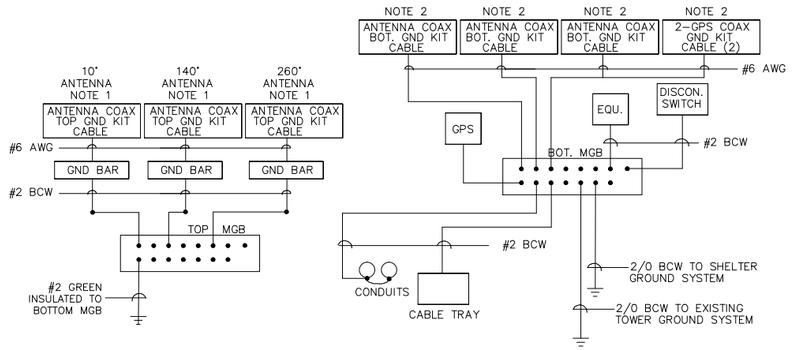
SCALE: N.T.S.



NOTE:
1. CONTRACTOR TO CONFIRM ALL PARTS
2. INSTALL ALL EQUIPMENT PER MANUFACTURERS RECOMMENDATIONS

PLUMBING DIAGRAM FACE 3/05

SCALE: N.T.S.



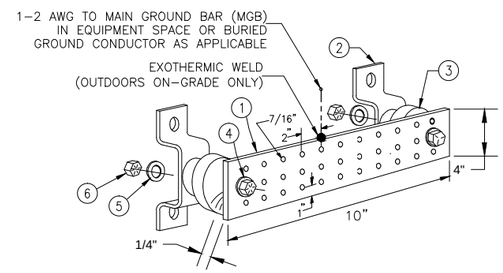
NOTE:

1. BOND ANTENNA GROUNDING KIT CABLE TO TOP CIGBE
2. BOND ANTENNA GROUNDING KIT CABLE TO BOTTOM CIGBE

SCHEMATIC GROUNDING DIAGRAM 4/05

SCALE: N.T.S.

NEWTON INSTRUMENT COMPANY, INC. BUTNER, N.C. OR APPROVED EQUAL			
ITEM	REQ.	PART NO.	DESCRIPTION
1	1	1/4"x4"x12"	PRE DRILLED GND. BAR
2	2	A-6056	WALL MTG. BRKT.
3	2	3061-4	INSULATORS
4	2	3012-13	5/8"-11x4" H.H.C.S.
5	4	3015-8	5/8 LOCKWASHER
6	2	3014-8	5/8"-11 HEX NUT



GROUND BAR DETAIL 6/05

SCALE: N.T.S.

VRG
VERTICAL RESOURCES GRP.
489 Washington Street
Auburn, MA 01501
Tel. (508) 981- 9590
Fax (508) 519 - 8939
mnobre@verticalresourcesgrp.com

EMPIRE telecom
EMPIRE TELECOM USA, LLC
16 ESQUIRE ROAD
BILLERICA, MA 01821

SITE NUMBER: CT5534
SITE NAME: NEW FAIRFIELD SW
PROJECT: LTE 2C 1900

16 TITICUS MOUNTAIN ROAD
NEW FAIRFIELD, CT 06812
FAIRFIELD COUNTY

at&t Mobility
550 COCHITUATE RD
SUITES 13 & 14
FRAMINGHAM, MA 01701

NO.	DATE	REVISION	BY	CHK	APP'D
0	02/22/17	FOR CONSTRUCTION	E.L.P.	G.A.M.	

SCALE | DESIGNED BY: M.N. | DRAWN BY: G.A.M.

STATE OF CONNECTICUT JAMES P. STRAKE No. 8657 REGISTERED PROFESSIONAL ENGINEER

AT&T MOBILITY

GROUNDING DETAILS

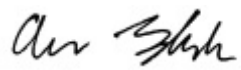
JOB NUMBER	DRAWING NUMBER	REV
50-145	05	0

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**187.5 ft Self Supported Tower**
ATC Site Name	:	**New Fairfield, CT**
ATC Site Number	:	**88014**
Engineering Number	:	**OAA695532_C3_02**
Proposed Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**New Fairfield SW**
Carrier Site Number	:	**CT5534**
Site Location	:	**22 Titicus Mtn Road** **New Fairfield, CT 06812-2565** **41.450700,-73.516000**
County	:	**Fairfield**
Date	:	**April 3, 2017**
Max Usage	:	**89%**
Result	:	**Pass**

Prepared By:
Aaron Black
Structural Engineer I



Reviewed By:

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 187.5 ft self-supported tower to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	Analysis by CSEI, ATC Eng. #26464321, dated August 21, 2006.
Foundation Drawing	Mapping By Geotel Report #E08-291-F, dated May 19, 2008
Geotechnical Report	Geotel Report #E08-291-G, dated May 19, 2008

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	90 mph (3-Second Gust, V_{ASD}) / 115 mph (3-Second Gust, V_{ULT})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Spectral Response:	Ss = 0.22, S_1 = 0.07
Site Class:	D - Stiff Soil

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
187.5	193.0	3	Ericsson RRUS 11 B12	Platform	(12) 1 5/8" Coax (1) 1 5/8" Fiber	T-Mobile
		3	Ericsson AIR 21, 1.3 M, B2A B4P			
		3	Ericsson AIR 21, 1.3M, B4A B2P			
		3	Ericsson KRY 112 144/1			
	191.0	3	Commscope LNX-6515DS-VTM			
185.0	185.0	1	DragonWave A-ANT-23G-2.5-C	Side Arms	(6) 5/16" (0.31") Coax (2) 1/2" Coax (1) 2" Conduit	Clearwire
		3	Argus LLPX310R			
		2	DragonWave Horizon Compact			
		1	DragonWave A-ANT-11G-4-C			
		3	NextNet BTS-2500			
170.3	170.3	-	-	Catwalk	-	-
168.0	170.0	3	RFS APXVSPP18-C-A20	Sector Frames	(3) 1 1/4" Hybriflex (1) 1 1/4" (1.25") Fiber	Sprint Nextel
		3	RFS RFS APXV9TM14-ALU-I20			
		3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
		3	Alcatel-Lucent 4x40W RRH			
		3	Alcatel-Lucent 2X50W RRH w/o Filter			
160.0	160.0	3	Allgon 7770.00	Sector Frames	(6) 1 5/8" Coax (2) 0.74" 8 AWG 7 (1) 3" conduit	AT&T Mobility
		3	Ericsson RRUS 11 (Band 12) (55 lb)			
		6	Powerwave LGP21401			
145.0	147.0	3	Antel BXA-171085-8BF-EDIN-X	Sector Frames	(12) 1 5/8" Coax	Verizon
		3	Antel BXA-70063/6CF_			
		4	Antel LPA-80063/4CF			
		2	Antel LPA-80080/4CF ___			
		6	RFS FD9R6004/2C-3L			
137.5	137.5	1	Dielectric TLP-16A-1E	Rest Platform	-	Qualcomm
112.5	112.5	1	Dielectric TLP-16A-1E	Side Arm	-	
100.0	100.0	-	-	Platform	-	-
87.5	87.5	-	-	Rest Platform	-	
70.0	80.0	1	Andrew DB616E-BC	Side Arm	(1) 7/8" Coax	US Dept Of Homeland Security
50.0	50.0	-	-	Rest Platform	-	-
33.3	-	-	-	-	(4) Coax Cage	

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
160.0	160.0	3	Powerwave P65-16-XLH-RR	-	(1) 0.28" RG-6	AT&T Mobility
		1	Raycap DC6-48-60-18-8F.			

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
160.0	160.0	3	CCI HPA-65R-BUU-H6	Sector Frames	(1) 0.28" Fiber	AT&T Mobility
		3	Ericsson RRUS 32 B2			
		1	Raycap DC6-48-60-18-8F			

[1]Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Install proposed coax stacked on top of existing AT&T Mobility coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	55%	Pass
Diagonals	89%	Pass
Horizontals	43%	Pass
Anchor Bolts	34%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	161.0	60%
Axial (Kips)	218.1	25%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
185.0	DragonWave A-ANT-23G-2.5-C	Clearwire	0.107	0.259	0.173
	DragonWave A-ANT-11G-4-C				
160.0	Raycap DC6-48-60-18-8F	AT&T Mobility	0.083	0.171	0.051
	Ericsson RRUS 32 B2				
	CCI HPA-65R-BUU-H6				

***Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G**

AMERICAN TOWER®
CORPORATION

Standard Conditions

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

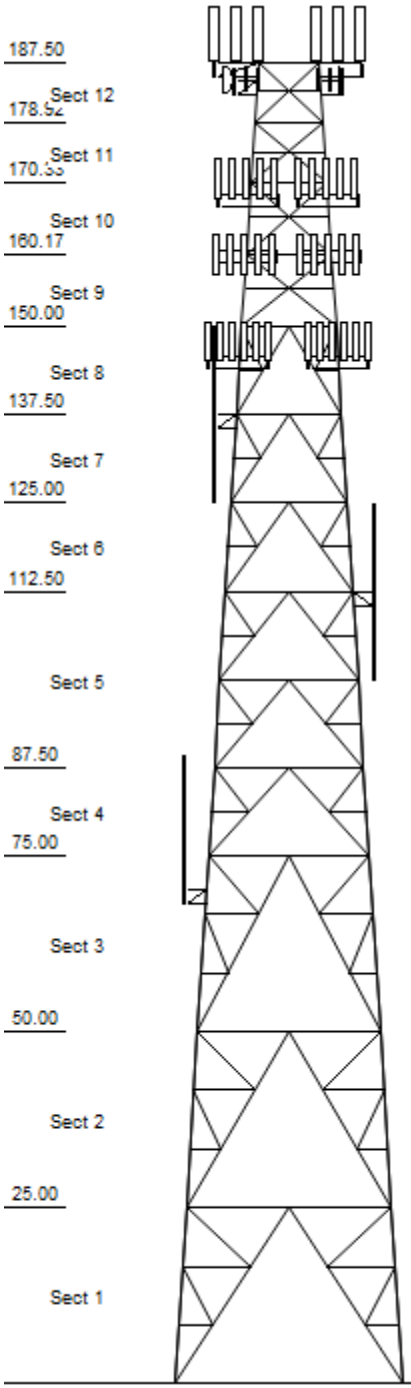
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Loads: 90 mph no ice
50 mph w/ 3/4" radial ice
Site Class: D Ss: 0.22 S1: 0.07
60 mph Serviceability

Job Information

Tower :	88014	Location :	New Fairfield, CT
Code :	ANSI/TIA-222-G	Shape :	Square
Client :	AT&T MOBILITY		

Base Width : 32.45 ft
Top Width : 9.00 ft

Sections Properties

Section	Leg Members		Diagonal Members	Horizontal Members
1	SAE 36 ksi	8X8X0.875	DAS 36 ksi 3.5X3X0.25	DAL 36 ksi 3X2.5X0.3125
2	SAE 36 ksi	8X8X0.75	DAS 36 ksi 3X2.5X0.25	DAL 36 ksi 3X2.5X0.25
3	SAE 36 ksi	8X8X0.75	DAS 36 ksi 3X2.5X0.25	DAE 36 ksi 2.5X2.5X0.25
4	SAE 36 ksi	6X6X0.875	DAE 36 ksi 2.5X2.5X0.25	DAE 36 ksi 2.5X2.5X0.25
5	SAE 36 ksi	6X6X0.75	DAE 36 ksi 2.5X2.5X0.25	DAE 36 ksi 2.5X2.5X0.25
6 - 7	SAE 36 ksi	6X6X0.5625	DAL 36 ksi 2.5X2X0.25	DAE 36 ksi 2.5X2.5X0.25
8	SAE 36 ksi	6X6X0.4375	DAL 36 ksi 2.5X2X0.25	DAE 36 ksi 2.5X2.5X0.25
9	SAE 36 ksi	5X5X0.4375	SAE 36 ksi 3.5X3.5X0.25	SAU 36 ksi 3X2.5X0.25
10	SAE 36 ksi	5X5X0.4375	SAE 36 ksi 3.5X3.5X0.25	DAL 36 ksi 3X2.5X0.25
11	SAE 36 ksi	5X5X0.3125	SAE 36 ksi 3X3X0.25	SAU 36 ksi 3X2.5X0.25
12	SAE 36 ksi	5X5X0.3125	SAE 36 ksi 3X3X0.25	CHN 36 ksi C8 x 11.5

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
187.50	Panel	3	Commscope LNX-6515DS-VTM
187.50	Panel	3	Ericsson RRUS 11 B12
187.50	Panel	3	Ericsson AIR 21, 1.3 M, B2A B4
187.50	Panel	3	Ericsson AIR 21, 1.3M, B4A B2P
187.50	Panel	3	Ericsson KRY 112 144/1
187.50	Straight Arm	6	Pipe Mount
187.50	Platform	1	Platform
185.00	Dish	1	DragonWave A-ANT-23G-2.5-C
185.00	Straight Arm	3	Round Side Arm
185.00	Panel	3	Argus LLPX310R
185.00	Panel	2	DragonWave Horizon Compact
185.00	Dish	1	DragonWave A-ANT-11G-4-C
185.00	Panel	3	NextNet BTS-2500
170.33	Platform	1	Catwalk
168.00	Mounting Frame	3	Flat Light Sector Frames
168.00	Panel	3	RFS APXVSPP18-C-A20
168.00	Panel	3	RFS RFS APXV9TM14-ALU-I20
168.00	Panel	3	Alcatel-Lucent TD-RRH8x20-25 w
168.00	Panel	3	Alcatel-Lucent 4x40W RRH
168.00	Panel	3	Alcatel-Lucent 2X50W RRH w/o F
160.00	Mounting Frame	3	Flat Light Sector Frames
160.00	Panel	3	CCI HPA-65R-BUU-H6
160.00	Panel	3	Allgon 7770.00
160.00	Panel	3	Ericsson RRUS 32 B2
160.00	Panel	3	Ericsson RRUS 11 (Band 12) (55
160.00	Panel	1	Raycap DC6-48-60-18-8F
160.00	Panel	6	Powerwave LGP21401
145.00	Panel	3	Amphenol Antel BXA-171085-8BF-
145.00	Mounting Frame	3	Flat Light Sector Frames
145.00	Panel	3	Antel BXA-70063/6CF_
145.00	Panel	4	Antel LPA-80063/4CF
145.00	Panel	2	Antel LPA-80080/4CF ___
145.00	Panel	6	RFS FD9R6004/2C-3L
137.50	Whip	1	Dielectric TLP-16A-1E
137.50	Straight Arm	1	Flat Side Arm
137.50	Mounting Frame	1	Rest Platform
112.50	Whip	1	Dielectric TLP-16A-1E
112.50	Straight Arm	1	Flat Side Arm
100.00	Platform	1	Platform
87.50	Mounting Frame	1	Rest Platform
70.00	Whip	1	Andrew DB616E-BC
70.00	Straight Arm	1	Flat Side Arm
50.00	Mounting Frame	1	Rest Platform

Job Information

Tower :	**88014**	**Location :**	**New Fairfield, CT**
Code :	**ANSI/TIA-222-G**	**Shape :**	**Square**
Client :	**AT&T MOBILITY**		

Base Width : 32.45 ft

Top Width : 9.00 ft

Linear Appurtenance

Elev (ft) From	To	Qty	Description
5.00	187.50	1	Wave Guide
5.00	187.50	1	Climbing Ladder
5.00	187.50	1	1 5/8" Fiber
5.00	187.50	6	1 5/8" Coax
5.00	187.50	6	1 5/8" Coax
5.00	185.00	6	5/16" (0.31", 7.9mm)
5.00	185.00	1	2" Conduit
5.00	185.00	2	1/2" Coax
5.00	182.00	1	Wave Guide
5.00	168.00	3	1 1/4" Hybriflex Cab
5.00	168.00	1	1 1/4" (1.25", 31.8m
5.00	160.00	1	Wave Guide
5.00	160.00	1	3" conduit
5.00	160.00	6	1 5/8" Coax
5.00	160.00	2	0.74" (18.7mm) 8 AWG
5.00	160.00	1	0.28" (7mm) Fiber
5.00	145.00	1	Wave Guide
5.00	145.00	12	1 5/8" Coax
0.00	70.00	1	7/8" Coax
8.33	33.33	4	Coax Cage

Global Base Foundation Design Loads

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	8,513.04	130.21	74.65
DL + WL + IL	3,101.92	305.83	27.94

Individual Base Foundation Design Loads

Vertical (kip)	Uplift (kip)	Horizontal (kip)
218.08	160.99	30.13

Site Number:	88014	Code:	ANSI/TIA-222-G	
Site Name:	New Fairfield, CT	Engineering Number:	OAA695532_C3_02	4/3/2017 3:38:14 PM
Customer:	AT&T MOBILITY			

Analysis Parameters

Location:	FAIRFIELD County, CT	Height (ft):	187.5
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Square	Bottom Face Width (ft):	32.45
Tower Manufacturer:	AT&T TAG	Top Face Width (ft):	9.00
Tower Type:	Self Support	Anchor Bolt Detail Type	c

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	90 mph
Exposure Category:	B	Design Windspeed With Ice:	50 mph
Topographic Category:	1	Operational Windspeed:	60 mph
Crest Height:	0.0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	0.66				
T_L (sec):	6	p:	1.3	C_S:	0.054
S_S:	0.215	S_1:	0.067	C_S, Max:	0.054
F_a:	1.600	F_V:	2.400	C_S, Min:	0.030
S_{ds}:	0.229	S_{d1}:	0.107		

Load Cases

1.2D + 1.6W Normal	90 mph Normal to Face with No Ice
1.2D + 1.6W 45 deg	90 mph 45 degree with No Ice
1.2D + 1.6W 90 deg	90 mph 90 degree with No Ice
1.2D + 1.6W 135 deg	90 mph 135 degree with No Ice
1.2D + 1.6W 180 deg	90 mph 180 degree with No Ice
1.2D + 1.6W 225 deg	90 mph 225 degree with No Ice
1.2D + 1.6W 270 deg	90 mph 270 degree with No Ice
1.2D + 1.6W 315 deg	90 mph 315 degree with No Ice
0.9D + 1.6W Normal	90 mph Normal to Face with No Ice (Reduced DL)
0.9D + 1.6W 45 deg	90 mph 45 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	90 mph 90 deg with No Ice (Reduced DL)
0.9D + 1.6W 135 deg	90 mph 135 deg with No Ice (Reduced DL)
0.9D + 1.6W 180 deg	90 mph 180 deg with No Ice (Reduced DL)
0.9D + 1.6W 225 deg	90 mph 225 deg with No Ice (Reduced DL)
0.9D + 1.6W 270 deg	90 mph 270 deg with No Ice (Reduced DL)
0.9D + 1.6W 315 deg	90 mph 315 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	50 mph Normal with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 45 deg	50 mph 45 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	50 mph 90 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 135 deg	50 mph 135 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 180 deg	50 mph 180 deg with 0.75 in Radial Ice

Analysis Parameters

1.2D + 1.0Di + 1.0Wi 225 deg	50 mph 225 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 270 deg	50 mph 270 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 315 deg	50 mph 315 deg with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	Seismic Normal
(1.2 + 0.2Sds) * DL + E 45 deg	Seismic 45 deg
(1.2 + 0.2Sds) * DL + E 90 deg	Seismic 90 deg
(1.2 + 0.2Sds) * DL + E 135 deg	Seismic 135 deg
(1.2 + 0.2Sds) * DL + E 180 deg	Seismic 180 deg
(1.2 + 0.2Sds) * DL + E 225 deg	Seismic 225 deg
(1.2 + 0.2Sds) * DL + E 270 deg	Seismic 270 deg
(1.2 + 0.2Sds) * DL + E 315 deg	Seismic 315 deg
(0.9 - 0.2Sds) * DL + E Normal	Seismic (Reduced DL) Normal
(0.9 - 0.2Sds) * DL + E 45 deg	Seismic (Reduced DL) 45 deg
(0.9 - 0.2Sds) * DL + E 90 deg	Seismic (Reduced DL) 90 deg
(0.9 - 0.2Sds) * DL + E 135 deg	Seismic (Reduced DL) 135 deg
(0.9 - 0.2Sds) * DL + E 180 deg	Seismic (Reduced DL) 180 deg
(0.9 - 0.2Sds) * DL + E 225 deg	Seismic (Reduced DL) 225 deg
(0.9 - 0.2Sds) * DL + E 270 deg	Seismic (Reduced DL) 270 deg
(0.9 - 0.2Sds) * DL + E 315 deg	Seismic (Reduced DL) 315 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 45 deg	Serviceability - 60 mph Wind 45 deg
1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg
1.0D + 1.0W Service 135 deg	Serviceability - 60 mph Wind 135 deg
1.0D + 1.0W Service 180 deg	Serviceability - 60 mph Wind 180 deg
1.0D + 1.0W Service 225 deg	Serviceability - 60 mph Wind 225 deg
1.0D + 1.0W Service 270 deg	Serviceability - 60 mph Wind 270 deg
1.0D + 1.0W Service 315 deg	Serviceability - 60 mph Wind 315 deg

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
187.5	Ericsson KRY 112	3	11	0.4	0.6	6.1	2.7	1.00	0.50	5.5	96.7	21.02	18	48
187.5	Ericsson RRUS 11	3	51	2.8	1.6	17.0	7.2	1.00	0.67	5.5	881.6	21.02	160	219
187.5	Pipe Mount	6	150	3.3	6.0	6.0	6.0	1.00	1.00	3.0	1691.6	20.94	564	1296
187.5	Ericsson AIR 21, 1.3	3	83	6.1	4.7	12.0	8.0	1.00	0.71	5.5	2025.9	21.02	368	359
187.5	Ericsson AIR 21,	3	82	6.1	4.7	12.1	7.9	1.00	0.70	5.5	2010.6	21.02	366	352
187.5	Commscope LNX-	3	50	11.4	8.0	11.9	7.1	1.00	0.70	3.5	2398.4	20.96	685	217
187.5	Platform	1	8000	70.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	20.85	1984	11520
185.0	DragonWave	2	11	0.4	0.4	9.3	9.3	0.80	0.50	0.0	0.0	20.77	10	31
185.0	NextNet BTS-2500	3	35	1.8	1.6	11.3	5.1	0.80	0.50	0.0	0.0	20.77	62	151
185.0	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	20.77	183	124
185.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.0	20.77	295	648
185.0	DragonWave A-ANT-	1	48	8.4	2.9	35.0	0.0	1.00	1.00	0.0	0.0	20.77	238	69
185.0	DragonWave A-ANT-	1	121	17.8	4.2	50.8	0.0	1.00	1.00	0.0	0.0	20.77	502	174
170.3	Catwalk	1	6500	55.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	20.28	1517	9360
168.0	Alcatel-Lucent	3	53	2.1	2.6	13.0	12.2	0.80	0.67	2.0	182.6	20.27	91	229
168.0	Alcatel-Lucent	3	91	3.3	1.9	13.0	17.3	0.80	0.67	2.0	291.7	20.27	146	393
168.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.67	2.0	359.1	20.27	180	302
168.0	RFS RFS	3	55	6.3	4.7	12.6	6.3	0.80	0.66	2.0	553.7	20.27	277	238
168.0	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	2.0	732.2	20.27	366	246
168.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	20.20	830	1728
160.0	Powerwave	6	14	1.1	1.2	9.2	2.6	0.80	0.50	-1.0	71.4	19.89	71	122
160.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	19.92	24	29
160.0	Ericsson RRUS 11	3	55	2.5	1.5	17.0	7.2	0.80	0.67	0.0	0.0	19.92	110	238
160.0	Ericsson RRUS 32 B2	3	53	2.7	2.3	12.1	7.0	0.80	0.67	0.0	0.0	19.92	119	229
160.0	Allgon 7770.00	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	19.92	233	151
160.0	CCI HPA-65R-BUU-H6	3	51	9.7	6.0	14.8	9.0	0.80	0.69	0.0	0.0	19.92	433	220
160.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	19.92	818	1728
145.0	RFS FD9R6004/2C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	2.0	47.0	19.44	23	22
145.0	Amphenol Antel BXA-	3	11	2.9	4.0	6.1	4.1	0.80	0.71	2.0	265.0	19.44	132	45
145.0	Antel LPA-80080/4CF	2	12	5.4	3.9	5.5	13.2	0.80	0.64	2.0	292.5	19.44	146	35
145.0	Antel LPA-80063/4CF	4	20	6.1	4.0	15.2	13.2	0.80	0.76	2.0	789.8	19.44	395	115
145.0	Antel BXA-	3	17	7.6	5.9	11.2	4.5	0.80	0.65	2.0	624.6	19.44	312	73
145.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	19.37	796	1728
137.5	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.08	163	216
137.5	Rest Platform	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.08	389	720
137.5	Dielectric TLP-16A-	1	290	23.7	25.1	10.0	10.0	1.00	1.00	0.0	0.0	19.08	615	418
112.5	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	18.01	154	216
112.5	Dielectric TLP-16A-	1	290	23.7	25.1	10.0	10.0	1.00	1.00	0.0	0.0	18.01	581	418
100.0	Platform	1	5500	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	17.42	1066	7920
87.50	Rest Platform	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	16.77	342	720
70.00	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	15.73	135	216
70.00	Andrew DB616E-BC	1	51	6.7	19.3	3.5	3.5	1.00	1.00	10.0	1495.8	16.34	150	73
50.00	Rest Platform	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	14.29	291	720
	Totals	107	30608	819.7										

Discrete Appurtenance Properties 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
187.5	Ericsson KRY 112	3	11	0.4	0.6	6.1	2.7	1.00	0.50	5.5	96.7	21.02	18	27
187.5	Ericsson RRUS 11	3	51	2.8	1.6	17.0	7.2	1.00	0.67	5.5	881.6	21.02	160	123
187.5	Pipe Mount	6	150	3.3	6.0	6.0	6.0	1.00	1.00	3.0	1691.6	20.94	564	729

Tower Loading

187.5	Ericsson AIR 21, 1.3	3	83	6.1	4.7	12.0	8.0	1.00	0.71	5.5	2025.9	21.02	368	202
187.5	Ericsson AIR 21,	3	82	6.1	4.7	12.1	7.9	1.00	0.70	5.5	2010.6	21.02	366	198
187.5	Commscope LNX-	3	50	11.4	8.0	11.9	7.1	1.00	0.70	3.5	2398.4	20.96	685	122
187.5	Platform	1	8000	70.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	20.85	1984	6480
185.0	DragonWave	2	11	0.4	0.4	9.3	9.3	0.80	0.50	0.0	0.0	20.77	10	17
185.0	NextNet BTS-2500	3	35	1.8	1.6	11.3	5.1	0.80	0.50	0.0	0.0	20.77	62	85
185.0	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	20.77	183	69
185.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.0	20.77	295	365
185.0	DragonWave A-ANT-	1	48	8.4	2.9	35.0	0.0	1.00	1.00	0.0	0.0	20.77	238	39
185.0	DragonWave A-ANT-	1	121	17.8	4.2	50.8	0.0	1.00	1.00	0.0	0.0	20.77	502	98
170.3	Catwalk	1	6500	55.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	20.28	1517	5265
168.0	Alcatel-Lucent	3	53	2.1	2.6	13.0	12.2	0.80	0.67	2.0	182.6	20.27	91	129
168.0	Alcatel-Lucent	3	91	3.3	1.9	13.0	17.3	0.80	0.67	2.0	291.7	20.27	146	221
168.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.67	2.0	359.1	20.27	180	170
168.0	RFS RFS	3	55	6.3	4.7	12.6	6.3	0.80	0.66	2.0	553.7	20.27	277	134
168.0	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	2.0	732.2	20.27	366	139
168.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	20.20	830	972
160.0	Powerwave	6	14	1.1	1.2	9.2	2.6	0.80	0.50	-1.0	71.4	19.89	71	69
160.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	19.92	24	16
160.0	Ericsson RRUS 11	3	55	2.5	1.5	17.0	7.2	0.80	0.67	0.0	0.0	19.92	110	134
160.0	Ericsson RRUS 32 B2	3	53	2.7	2.3	12.1	7.0	0.80	0.67	0.0	0.0	19.92	119	129
160.0	Allgon 7770.00	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	19.92	233	85
160.0	CCI HPA-65R-BUU-H6	3	51	9.7	6.0	14.8	9.0	0.80	0.69	0.0	0.0	19.92	433	124
160.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	19.92	818	972
145.0	RFS FD9R6004/2C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	2.0	47.0	19.44	23	13
145.0	Amphenol Antel BXA-	3	11	2.9	4.0	6.1	4.1	0.80	0.71	2.0	265.0	19.44	132	26
145.0	Antel LPA-80080/4CF	2	12	5.4	3.9	5.5	13.2	0.80	0.64	2.0	292.5	19.44	146	19
145.0	Antel LPA-80063/4CF	4	20	6.1	4.0	15.2	13.2	0.80	0.76	2.0	789.8	19.44	395	65
145.0	Antel BXA-	3	17	7.6	5.9	11.2	4.5	0.80	0.65	2.0	624.6	19.44	312	41
145.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	19.37	796	972
137.5	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.08	163	122
137.5	Rest Platform	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.08	389	405
137.5	Dielectric TLP-16A-	1	290	23.7	25.1	10.0	10.0	1.00	1.00	0.0	0.0	19.08	615	235
112.5	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	18.01	154	122
112.5	Dielectric TLP-16A-	1	290	23.7	25.1	10.0	10.0	1.00	1.00	0.0	0.0	18.01	581	235
100.0	Platform	1	5500	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	17.42	1066	4455
87.50	Rest Platform	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	16.77	342	405
70.00	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	15.73	135	122
70.00	Andrew DB616E-BC	1	51	6.7	19.3	3.5	3.5	1.00	1.00	10.0	1495.8	16.34	150	41
50.00	Rest Platform	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	14.29	291	405
	Totals	107	30608	819.7										

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
187.5	Ericsson KRY 112	3	28	0.6	0.6	6.1	2.7	1.00	0.50	5.5	29.2	6.49	5	108
187.5	Ericsson RRUS 11	3	139	3.5	1.6	17.0	7.2	1.00	0.67	5.5	212.4	6.49	39	538
187.5	Pipe Mount	6	417	5.7	6.0	6.0	6.0	1.00	1.00	3.0	558.7	6.46	186	3219
187.5	Ericsson AIR 21, 1.3	3	256	7.2	4.7	12.0	8.0	1.00	0.71	5.5	463.3	6.49	84	982
187.5	Ericsson AIR 21,	3	255	7.2	4.7	12.1	7.9	1.00	0.70	5.5	459.6	6.49	84	975
187.5	Commscope LNX-	3	320	13.1	8.0	11.9	7.1	1.00	0.70	3.5	530.8	6.47	152	1189
187.5	Platform	1	13868	101.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.43	555	18562
185.0	DragonWave	2	42	0.7	0.4	9.3	9.3	0.80	0.50	0.0	0.0	6.41	3	105
185.0	NextNet BTS-2500	3	94	2.4	1.6	11.3	5.1	0.80	0.50	0.0	0.0	6.41	16	365
185.0	Argus LLPX310R	3	139	5.2	3.5	11.8	4.5	0.80	0.63	0.0	0.0	6.41	43	522

Tower Loading

185.0	Round Side Arm	3	225	8.0	0.0	0.0	0.0	1.00	0.67	0.0	0.0	6.41	87	917
185.0	DragonWave A-ANT-	1	223	10.8	2.9	35.0	0.0	1.00	1.00	0.0	0.0	6.41	59	279
185.0	DragonWave A-ANT-	1	566	22.7	4.2	50.8	0.0	1.00	1.00	0.0	0.0	6.41	124	709
170.3	Catwalk	1	11173	82.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.26	439	14968
168.0	Alcatel-Lucent	3	184	4.2	2.6	13.0	12.2	0.80	0.67	2.0	71.3	6.26	36	701
168.0	Alcatel-Lucent	3	218	3.1	1.9	13.0	17.3	0.80	0.67	2.0	53.8	6.26	27	852
168.0	Alcatel-Lucent TD-	3	166	5.4	2.2	18.6	6.7	0.80	0.67	2.0	92.3	6.26	46	647
168.0	RFS RFS	3	194	8.5	4.7	12.6	6.3	0.80	0.66	2.0	143.9	6.26	72	740
168.0	RFS APXVSPP18-C-	3	259	9.3	6.0	11.8	7.0	0.80	0.69	2.0	164.3	6.26	82	973
168.0	Flat Light Sector	3	705	33.2	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.23	297	2824
160.0	Powerwave	6	48	1.6	1.2	9.2	2.6	0.80	0.50	-1.0	19.6	6.14	20	365
160.0	Raycap DC6-48-60-	1	101	2.5	2.0	9.7	9.7	0.80	1.00	0.0	0.0	6.15	11	126
160.0	Ericsson RRUS 11	3	136	3.2	1.5	17.0	7.2	0.80	0.67	0.0	0.0	6.15	27	528
160.0	Ericsson RRUS 32 B2	3	141	3.5	2.3	12.1	7.0	0.80	0.67	0.0	0.0	6.15	29	547
160.0	Allgon 7770.00	3	171	6.6	4.6	11.0	5.0	0.80	0.65	0.0	0.0	6.15	54	639
160.0	CCI HPA-65R-BUU-H6	3	300	11.0	6.0	14.8	9.0	0.80	0.69	0.0	0.0	6.15	95	1117
160.0	Flat Light Sector	3	703	33.1	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.15	292	2817
145.0	RFS FD9R6004/2C-3L	6	16	0.6	0.5	6.5	1.5	0.80	0.50	2.0	14.2	6.00	7	117
145.0	Amphenol Antel BXA-	3	93	3.8	4.0	6.1	4.1	0.80	0.71	2.0	66.1	6.00	33	344
145.0	Antel LPA-80080/4CF	2	147	3.5	3.9	5.5	13.2	0.80	0.64	2.0	36.1	6.00	18	358
145.0	Antel LPA-80063/4CF	4	225	7.2	4.0	15.2	13.2	0.80	0.76	2.0	178.3	6.00	89	1101
145.0	Antel BXA-	3	184	8.8	5.9	11.2	4.5	0.80	0.65	2.0	140.5	6.00	70	673
145.0	Flat Light Sector	3	700	33.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	5.98	283	2809
137.5	Flat Side Arm	1	222	8.7	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.89	44	303
137.5	Rest Platform	1	872	27.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.89	138	1166
137.5	Dielectric TLP-16A-	1	1098	32.7	25.1	10.0	10.0	1.00	1.00	0.0	0.0	5.89	163	1388
112.5	Flat Side Arm	1	220	8.7	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.56	41	300
112.5	Dielectric TLP-16A-	1	1073	32.5	25.1	10.0	10.0	1.00	1.00	0.0	0.0	5.56	154	1358
100.0	Platform	1	9261	66.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.38	304	12433
87.50	Rest Platform	1	855	26.9	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.17	118	1145
70.00	Flat Side Arm	1	217	8.6	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.86	35	297
70.00	Andrew DB616E-BC	1	300	13.1	19.3	3.5	3.5	1.00	1.00	10.0	560.4	5.04	56	372
50.00	Rest Platform	1	828	26.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.41	98	1114
	Totals	107	61871	1196.4										

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
187.5	Ericsson KRY 112	3	11	0.4	0.6	6.1	2.7	1.00	0.50	5.5	26.9	9.34	5	33
187.5	Ericsson RRUS 11	3	51	2.8	1.6	17.0	7.2	1.00	0.67	5.5	244.9	9.34	45	152
187.5	Pipe Mount	6	150	3.3	6.0	6.0	6.0	1.00	1.00	3.0	469.9	9.31	157	900
187.5	Ericsson AIR 21, 1.3	3	83	6.1	4.7	12.0	8.0	1.00	0.71	5.5	562.8	9.34	102	249
187.5	Ericsson AIR 21,	3	82	6.1	4.7	12.1	7.9	1.00	0.70	5.5	558.5	9.34	102	245
187.5	Commscope LNX-	3	50	11.4	8.0	11.9	7.1	1.00	0.70	3.5	666.2	9.31	190	151
187.5	Platform	1	8000	70.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	9.26	551	8000
185.0	DragonWave	2	11	0.4	0.4	9.3	9.3	0.80	0.50	0.0	0.0	9.23	3	21
185.0	NextNet BTS-2500	3	35	1.8	1.6	11.3	5.1	0.80	0.50	0.0	0.0	9.23	17	105
185.0	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	9.23	51	86
185.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.0	9.23	82	450
185.0	DragonWave A-ANT-	1	48	8.4	2.9	35.0	0.0	1.00	1.00	0.0	0.0	9.23	66	48
185.0	DragonWave A-ANT-	1	121	17.8	4.2	50.8	0.0	1.00	1.00	0.0	0.0	9.23	139	121
170.3	Catwalk	1	6500	55.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	9.01	421	6500
168.0	Alcatel-Lucent	3	53	2.1	2.6	13.0	12.2	0.80	0.67	2.0	50.7	9.01	25	159
168.0	Alcatel-Lucent	3	91	3.3	1.9	13.0	17.3	0.80	0.67	2.0	81.0	9.01	41	273
168.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.67	2.0	99.7	9.01	50	210

Site Number: 88014 Code: ANSI/TIA-222-G

Site Name: New Fairfield, CT Engineering Number: OAA695532_C3_02 4/3/2017 3:38:14 PM

Customer: AT&T MOBILITY

Tower Loading

168.0	RFS RFS	3	55	6.3	4.7	12.6	6.3	0.80	0.66	2.0	153.8	9.01	77	165
168.0	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	2.0	203.4	9.01	102	171
168.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.98	231	1200
160.0	Powerwave	6	14	1.1	1.2	9.2	2.6	0.80	0.50	-1.0	19.8	8.84	20	85
160.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	8.85	7	20
160.0	Ericsson RRUS 11	3	55	2.5	1.5	17.0	7.2	0.80	0.67	0.0	0.0	8.85	30	165
160.0	Ericsson RRUS 32 B2	3	53	2.7	2.3	12.1	7.0	0.80	0.67	0.0	0.0	8.85	33	159
160.0	Allgon 7770.00	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	8.85	65	105
160.0	CCI HPA-65R-BUU-H6	3	51	9.7	6.0	14.8	9.0	0.80	0.69	0.0	0.0	8.85	120	153
160.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.85	227	1200
145.0	RFS FD9R6004/2C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	2.0	13.0	8.64	7	16
145.0	Amphenol Antel BXA-	3	11	2.9	4.0	6.1	4.1	0.80	0.71	2.0	73.6	8.64	37	32
145.0	Antel LPA-80080/4CF	2	12	5.4	3.9	5.5	13.2	0.80	0.64	2.0	81.2	8.64	41	24
145.0	Antel LPA-80063/4CF	4	20	6.1	4.0	15.2	13.2	0.80	0.76	2.0	219.4	8.64	110	80
145.0	Antel BXA-	3	17	7.6	5.9	11.2	4.5	0.80	0.65	2.0	173.5	8.64	87	51
145.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.61	221	1200
137.5	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.48	45	150
137.5	Rest Platform	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.48	108	500
137.5	Dielectric TLP-16A-	1	290	23.7	25.1	10.0	10.0	1.00	1.00	0.0	0.0	8.48	171	290
112.5	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.01	43	150
112.5	Dielectric TLP-16A-	1	290	23.7	25.1	10.0	10.0	1.00	1.00	0.0	0.0	8.01	161	290
100.0	Platform	1	5500	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.74	296	5500
87.50	Rest Platform	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.45	95	500
70.00	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.99	37	150
70.00	Andrew DB616E-BC	1	51	6.7	19.3	3.5	3.5	1.00	1.00	10.0	415.5	7.26	42	51
50.00	Rest Platform	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.35	81	500
	Totals	107	30608	819.7										

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
5.00	187.5	1 5/8" Coax	6	1.98	0.82	50	3	Block	0.00	N	1.00	1.00	0.00
5.00	187.5	1 5/8" Coax	6	1.98	0.82	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
5.00	187.5	1 5/8" Fiber	1	1.63	1.61	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
5.00	187.5	Climbing Ladder	1	2.00	6.90	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
5.00	187.5	Wave Guide	1	2.00	6.00	0	3	Individual	0.00	N	1.00	1.00	0.00
5.00	185.0	1/2" Coax	2	0.63	0.15	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
5.00	185.0	2" Conduit	1	2.38	3.65	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
5.00	185.0	5/16" (0.31",	6	0.31	0.05	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
5.00	182.0	Wave Guide	1	2.00	6.00	0	4	Individual	0.00	N	1.00	1.00	0.00
5.00	168.0	1 1/4" (1.25",	1	1.25	1.05	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
5.00	168.0	1 1/4" Hybriflex	3	1.54	1.00	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
5.00	160.0	0.28" (7mm) Fiber	1	0.28	0.04	0	Lin App	Individual	0.00	N	1.00	0.00	0.01
5.00	160.0	0.74" (18.7mm) 8	2	0.74	0.49	0	Lin App	Individual	0.00	N	1.00	0.00	0.01
5.00	160.0	1 5/8" Coax	6	1.98	0.82	0	3	Individual	0.00	N	0.00	1.00	0.00
5.00	160.0	3" conduit	1	3.50	7.58	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
5.00	160.0	Wave Guide	1	2.00	6.00	0	3	Individual	0.00	N	1.00	1.00	0.00
5.00	145.0	1 5/8" Coax	12	1.98	0.82	0	1	Individual	0.00	N	1.00	1.00	0.00
5.00	145.0	Wave Guide	1	2.00	6.00	0	1	Individual	0.00	N	1.00	1.00	0.00
0.00	70.00	7/8" Coax	1	1.09	0.33	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
8.33	33.33	Coax Cage	4	12.0	25.0	0	2,4	Individual	0.00	N	1.00	1.00	0.00

Force/Stress Summary

Section: 1 1 Bot Elev (ft): 0.00 Height (ft): 25.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 8X8X0.875	-192.06	1.2D + 1.6W 45	25.10	33	33	33	63.3	36.0	347.12	0	0	0.00	0.00	55	Member Z
HORIZ DAL - 3X2.5X0.3125	-9.49	1.2D + 1.6W	14.66	100	100	17	171.7	36.0	24.84	0	0	0.00	0.00	38	Member X
DIAG DAS - 3.5X3X0.25	-20.02	1.2D + 1.6W	29.84	33	66	8	145.0	36.0	33.61	0	0	0.00	0.00	59	Member Y

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG SAE - 8X8X0.875	140.01	0.9D + 1.6W 45	36	58	428.65	0	0	0.00	0.00		32	Member
HORIZ DAL - 3X2.5X0.3125	10.15	1.2D + 1.6W	36	58	104.98	0	0	0.00	0.00	0.00	9	Member
DIAG DAS - 3.5X3X0.25	18.28	1.2D + 1.6W 90	36	58	101.41	0	0	0.00	0.00	0.00	18	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	139.13	0.9D + 1.6W 45	0.00	0	0	
Top Compression	191.11	1.2D + 1.6W 45	0.00	0		
Bot Tension	163.59	0.9D + 1.6W 45	602.76	34	4	2 1/4 A36
Bot Compression	218.33	1.2D + 1.6W 45	0.00	0		

Section: 2 2 Bot Elev (ft): 25.00 Height (ft): 25.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 8X8X0.75	-162.26	1.2D + 1.6W 45	25.10	33	33	33	62.9	36.0	300.96	0	0	0.00	0.00	53	Member Z
HORIZ DAL - 3X2.5X0.25	-9.38	0.9D + 1.6W 90	13.09	100	100	17	155.3	36.0	24.63	0	0	0.00	0.00	38	Member X
DIAG DAS - 3X2.5X0.25	-21.64	1.2D + 1.6W	29.02	33	65	8	156.7	36.0	24.19	0	0	0.00	0.00	89	Member Y

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG SAE - 8X8X0.75	116.18	0.9D + 1.6W 45	36	58	370.66	0	0	0.00	0.00		31	Member
HORIZ DAL - 3X2.5X0.25	9.70	1.2D + 1.6W	36	58	85.21	0	0	0.00	0.00	0.00	11	Member
DIAG DAS - 3X2.5X0.25	19.74	0.9D + 1.6W	36	58	85.21	0	0	0.00	0.00	0.00	23	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	115.32	0.9D + 1.6W 45	0.00	0	0	
Top Compression	161.36	1.2D + 1.6W 45	0.00	0		
Bot Tension	139.13	0.9D + 1.6W 45	0.00	0		
Bot Compression	191.11	1.2D + 1.6W 45	0.00	0		

Force/Stress Summary

Section: 3 3 Bot Elev (ft): 50.00 Height (ft): 25.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 8X8X0.75	-131.01	1.2D + 1.6W 45	25.10	33	33	33	62.9	36.0	300.96	0	0	0.00	0.00	43	Member Z
HORIZ DAE - 2.5X2.5X0.25	-8.46	1.2D + 1.6W	11.53	100	100	17	165.7	36.0	19.57	0	0	0.00	0.00	43	Member X
DIAG DAS - 3X2.5X0.25	-21.84	1.2D + 1.6W	28.26	33	66	8	155.0	36.0	24.73	0	0	0.00	0.00	88	Member Y

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG SAE - 8X8X0.75	91.45	0.9D + 1.6W 45	36	58	370.66	0	0	0.00	0.00		24	Member
HORIZ DAE - 2.5X2.5X0.25	9.01	1.2D + 1.6W	36	58	77.11	0	0	0.00	0.00	0.00	11	Member
DIAG DAS - 3X2.5X0.25	19.96	1.2D + 1.6W	36	58	85.21	0	0	0.00	0.00	0.00	23	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	90.67	0.9D + 1.6W 45	0.00	0	0	
Top Compression	130.17	1.2D + 1.6W 45	0.00	0		
Bot Tension	115.32	0.9D + 1.6W 45	0.00	0		
Bot Compression	161.36	1.2D + 1.6W 45	0.00	0		

Section: 4 4 Bot Elev (ft): 75.00 Height (ft): 12.500

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 6X6X0.875	-114.99	1.2D + 1.6W 45	12.55	50	50	50	64.4	36.0	253.50	0	0	0.00	0.00	45	Member Z
HORIZ DAE - 2.5X2.5X0.25	-7.58	1.2D + 1.6W	10.75	100	100	20	156.5	36.0	21.97	0	0	0.00	0.00	34	Member X
DIAG DAE - 2.5X2.5X0.25	-12.88	1.2D + 1.6W	17.02	50	100	12	167.1	36.0	19.26	0	0	0.00	0.00	66	Member Y

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG SAE - 6X6X0.875	80.03	0.9D + 1.6W 45	36	58	315.25	0	0	0.00	0.00		25	Member
HORIZ DAE - 2.5X2.5X0.25	8.08	1.2D + 1.6W	36	58	77.11	0	0	0.00	0.00	0.00	10	Member
DIAG DAE - 2.5X2.5X0.25	11.65	1.2D + 1.6W	36	58	77.11	0	0	0.00	0.00	0.00	15	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	79.33	0.9D + 1.6W 45	0.00	0	0	
Top Compression	114.24	1.2D + 1.6W 45	0.00	0		
Bot Tension	90.67	0.9D + 1.6W 45	0.00	0		
Bot Compression	130.17	1.2D + 1.6W 45	0.00	0		

Force/Stress Summary

Section: 5 5 Bot Elev (ft): 87.50 Height (ft): 25.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 6X6X0.75	-99.56	1.2D + 1.6W 45	12.55	50	50	50	64.4	36.0	219.89	0	0	0.00	0.00	45	Member Z
HORIZ DAE - 2.5X2.5X0.25	-7.23	1.2D + 1.6W 90	9.971	100	100	20	147.2	36.0	24.83	0	0	0.00	0.00	29	Member X
DIAG DAE - 2.5X2.5X0.25	-12.60	1.2D + 1.6W 90	16.50	50	100	12	162.8	36.0	20.29	0	0	0.00	0.00	62	Member Y

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG SAE - 6X6X0.75	67.90	0.9D + 1.6W 45	36	58	273.46	0	0	0.00	0.00		24	Member
HORIZ DAE - 2.5X2.5X0.25	7.45	1.2D + 1.6W	36	58	77.11	0	0	0.00	0.00	0.00	9	Member
DIAG DAE - 2.5X2.5X0.25	11.64	0.9D + 1.6W 90	36	58	77.11	0	0	0.00	0.00	0.00	15	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	56.45	0.9D + 1.6W 45	0.00	0	0	
Top Compression	82.28	1.2D + 1.6W 45	0.00	0		
Bot Tension	79.33	0.9D + 1.6W 45	0.00	0		
Bot Compression	114.24	1.2D + 1.6W 45	0.00	0		

Section: 6 6 Bot Elev (ft): 112.5 Height (ft): 12.500

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 6X6X0.5625	-67.98	1.2D + 1.6W 45	12.55	50	50	50	63.8	36.0	168.14	0	0	0.00	0.00	40	Member Z
HORIZ DAE - 2.5X2.5X0.25	-5.86	1.2D + 1.6W	8.408	100	100	25	128.6	36.0	32.30	0	0	0.00	0.00	18	Member X
DIAG DAL - 2.5X2X0.25	-11.45	1.2D + 1.6W	15.53	50	100	12	188.1	36.0	13.60	0	0	0.00	0.00	84	Member Y

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG SAE - 6X6X0.5625	45.06	0.9D + 1.6W 45	36	58	208.33	0	0	0.00	0.00		21	Member
HORIZ DAE - 2.5X2.5X0.25	6.17	1.2D + 1.6W	36	58	77.11	0	0	0.00	0.00	0.00	8	Member
DIAG DAL - 2.5X2X0.25	10.57	1.2D + 1.6W	36	58	69.01	0	0	0.00	0.00	0.00	15	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	44.52	0.9D + 1.6W 45	0.00	0	0	
Top Compression	67.40	1.2D + 1.6W 45	0.00	0		
Bot Tension	56.45	0.9D + 1.6W 45	0.00	0		
Bot Compression	82.28	1.2D + 1.6W 45	0.00	0		

Force/Stress Summary

Section: 7 6 Bot Elev (ft): 125.0 Height (ft): 12.500

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 6X6X0.5625	-53.05	1.2D + 1.6W 45	12.55	50	50	50	63.8	36.0	168.14	0	0	0.00	0.00	31	Member Z
HORIZ DAE - 2.5X2.5X0.25	-5.54	1.2D + 1.6W 90	7.626	100	120	25	119.0	36.0	36.59	0	0	0.00	0.00	15	Member X
DIAG DAL - 2.5X2X0.25	-11.30	1.2D + 1.6W	15.08	50	100	12	183.4	36.0	14.30	0	0	0.00	0.00	79	Member Y

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG SAE - 6X6X0.5625	32.60	0.9D + 1.6W 45	36	58	208.33	0	0	0.00	0.00		15	Member
HORIZ DAE - 2.5X2.5X0.25	5.67	1.2D + 1.6W	36	58	77.11	0	0	0.00	0.00	0.00	7	Member
DIAG DAL - 2.5X2X0.25	10.47	1.2D + 1.6W	36	58	69.01	0	0	0.00	0.00	0.00	15	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	32.09	0.9D + 1.6W 45	0.00	0	0	
Top Compression	52.52	1.2D + 1.6W 45	0.00	0		
Bot Tension	44.52	0.9D + 1.6W 45	0.00	0		
Bot Compression	67.40	1.2D + 1.6W 45	0.00	0		

Section: 8 7 Bot Elev (ft): 137.5 Height (ft): 12.500

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 6X6X0.4375	-38.36	1.2D + 1.6W 45	12.55	50	50	50	63.3	36.0	132.79	0	0	0.00	0.00	28	Member Z
HORIZ DAE - 2.5X2.5X0.25	-4.33	1.2D + 1.6W	6.845	100	107	25	106.8	36.0	42.29	0	0	0.00	0.00	10	Member X
DIAG DAL - 2.5X2X0.25	-10.68	1.2D + 1.6W	14.66	50	100	12	179.1	36.0	15.01	0	0	0.00	0.00	71	Member Y

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG SAE - 6X6X0.4375	20.70	0.9D + 1.6W 45	36	58	163.94	0	0	0.00	0.00		12	Member
HORIZ DAE - 2.5X2.5X0.25	5.45	1.2D + 1.6W	36	58	77.11	0	0	0.00	0.00	0.00	7	Member
DIAG DAL - 2.5X2X0.25	9.96	1.2D + 1.6W	36	58	69.01	0	0	0.00	0.00	0.00	14	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	20.20	0.9D + 1.6W 45	0.00	0	0	
Top Compression	37.74	1.2D + 1.6W 45	0.00	0		
Bot Tension	32.09	0.9D + 1.6W 45	0.00	0		
Bot Compression	52.52	1.2D + 1.6W 45	0.00	0		

Force/Stress Summary

Section: 9 8 - lower Bot Elev (ft): 150.0 Height (ft): 10.167

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 5X5X0.4375	-30.18	1.2D + 1.6W 45	10.21	50	50	50	62.1	36.0	110.54	0	0	0.00	0.00	27	Member Z
HORIZ SAU - 3X2.5X0.25	-1.23	0.9D + 1.6W	12.41	50	100	50	167.9	36.0	10.50	0	0	0.00	0.00	11	Member Y
DIAG SAE - 3.5X3.5X0.25	-6.09	1.2D + 1.6W	16.55	50	50	50	138.6	36.0	19.86	0	0	0.00	0.00	30	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG SAE - 5X5X0.4375	16.13	0.9D + 1.6W 45	36	58	135.43	0	0	0.00	0.00		11	Member
HORIZ SAU - 3X2.5X0.25	2.44	1.2D + 1.6W	36	58	42.44	0	0	0.00	0.00	0.00	5	Member
DIAG SAE - 3.5X3.5X0.25	4.43	1.2D + 1.6W	36	58	54.76	0	0	0.00	0.00	0.00	8	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	11.41	0.9D + 1.6W 45	0.00	0	0	
Top Compression	27.13	1.2D + 1.6W 45	0.00	0		
Bot Tension	20.20	0.9D + 1.6W 45	0.00	0		
Bot Compression	37.74	1.2D + 1.6W 45	0.00	0		

Section: 10 8 - upper Bot Elev (ft): 160.1 Height (ft): 10.167

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 5X5X0.4375	-20.16	1.2D + 1.6W 45	10.21	50	50	50	62.1	36.0	110.54	0	0	0.00	0.00	18	Member Z
HORIZ DAL - 3X2.5X0.25	-0.62	1.2D + 1.6W	11.14	50	100	50	172.4	36.0	19.99	0	0	0.00	0.00	3	Member Y
DIAG SAE - 3.5X3.5X0.25	-5.25	1.2D + 1.6W	15.57	50	50	50	132.1	36.0	21.85	0	0	0.00	0.00	24	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG SAE - 5X5X0.4375	8.54	0.9D + 1.6W 45	36	58	135.43	0	0	0.00	0.00		6	Member
HORIZ DAL - 3X2.5X0.25	1.55	1.2D + 1.6W	36	58	85.21	0	0	0.00	0.00	0.00	1	Member
DIAG SAE - 3.5X3.5X0.25	3.63	1.2D + 1.6W	36	58	54.76	0	0	0.00	0.00	0.00	6	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	3.88	0.9D + 1.6W 315	0.00	0	0	
Top Compression	18.76	1.2D + 1.0Di +	0.00	0		
Bot Tension	11.41	0.9D + 1.6W 45	0.00	0		
Bot Compression	27.13	1.2D + 1.6W 45	0.00	0		

Force/Stress Summary

Section: 11 9 - lower Bot Elev (ft): 170.3 Height (ft): 8.583

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 5X5X0.3125	-10.58	1.2D + 1.6W 45	8.62	50	50	50	52.0	35.9	84.92	0	0	0.00	0.00	12	Member Z
HORIZ SAU - 3X2.5X0.25	-0.28	0.9D + 1.6W	10.07	50	100	50	144.9	36.0	14.09	0	0	0.00	0.00	2	Member Y
DIAG SAE - 3X3X0.25	-3.32	1.2D + 1.6W 90	13.65	50	50	50	134.1	36.0	18.10	0	0	0.00	0.00	18	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG SAE - 5X5X0.3125	4.12	0.9D + 1.6W 45	36	58	98.17	0	0	0.00	0.00		4	Member
HORIZ SAU - 3X2.5X0.25	1.03	1.2D + 1.6W	36	58	42.44	0	0	0.00	0.00	0.00	2	Member
DIAG SAE - 3X3X0.25	2.36	1.2D + 1.6W 90	36	58	46.66	0	0	0.00	0.00	0.00	5	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	1.42	0.9D + 1.6W 45	0.00	0	0	
Top Compression	10.45	1.2D + 1.0Di +	0.00	0		
Bot Tension	3.88	0.9D + 1.6W 315	0.00	0		
Bot Compression	18.76	1.2D + 1.0Di +	0.00	0		

Section: 12 9 - upper Bot Elev (ft): 178.9 Height (ft): 8.583

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SAE - 5X5X0.3125	-6.89	1.2D + 1.0Di +	8.62	50	50	50	52.0	35.9	84.92	0	0	0.00	0.00	8	Member Z
HORIZ CHN - C8 x 11.5	-0.04	1.2D + 1.6W	9.001	100	100	100	160.3	36.0	29.72	0	0	0.00	0.00	0	Member Y
DIAG SAE - 3X3X0.25	-3.37	1.2D + 1.6W	12.84	50	50	50	127.8	36.0	19.75	0	0	0.00	0.00	17	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00		0	
HORIZ CHN - C8 x 11.5	0.10	1.2D + 1.6W	36	58	109.51	0	0	0.00	0.00	0.00	0	Member
DIAG SAE - 3X3X0.25	2.46	0.9D + 1.6W	36	58	46.66	0	0	0.00	0.00	0.00	5	Member

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	0.00		0.00	0	0	
Top Compression	7.76	1.2D + 1.0Di +	0.00	0		
Bot Tension	1.42	0.9D + 1.6W 45	0.00	0		
Bot Compression	10.45	1.2D + 1.0Di +	0.00	0		

Detailed Reactions

Load Case	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.2D + 1.6W Normal	**1**	**-10.21**	**157.81**	**-20.13**	
	1a	**5.44**	**-92.71**	**-15.48**	
	1b	**-5.44**	**-92.71**	**-15.48**	
	1c	**10.21**	**157.81**	**-20.13**	
1.2D + 1.6W 45 deg	**1**	**-21.31**	**218.08**	**-21.29**	
	1a	**-9.78**	**32.23**	**-5.02**	
	1b	**-16.69**	**-152.97**	**-16.67**	
	1c	**-5.00**	**32.87**	**-9.80**	
1.2D + 1.6W 90 deg	**1**	**-20.13**	**157.36**	**-10.18**	
	1a	**-20.13**	**157.36**	**10.18**	
	1b	**-15.48**	**-92.25**	**-5.41**	
	1c	**-15.48**	**-92.25**	**5.41**	
1.2D + 1.6W 135 deg	**1**	**-9.78**	**32.23**	**5.02**	
	1a	**-21.31**	**218.08**	**21.29**	
	1b	**-5.00**	**32.87**	**9.80**	
	1c	**-16.69**	**-152.97**	**16.67**	
1.2D + 1.6W 180 deg	**1**	**5.44**	**-92.71**	**15.48**	
	1a	**-10.21**	**157.81**	**20.13**	
	1b	**10.21**	**157.81**	**20.13**	
	1c	**-5.44**	**-92.71**	**15.48**	
1.2D + 1.6W 225 deg	**1**	**16.69**	**-152.97**	**16.67**	
	1a	**5.00**	**32.87**	**9.80**	
	1b	**21.31**	**218.08**	**21.29**	
	1c	**9.78**	**32.23**	**5.02**	
1.2D + 1.6W 270 deg	**1**	**15.48**	**-92.25**	**5.41**	
	1a	**15.48**	**-92.25**	**-5.41**	
	1b	**20.13**	**157.36**	**10.18**	
	1c	**20.13**	**157.36**	**-10.18**	
1.2D + 1.6W 315 deg	**1**	**5.00**	**32.87**	**-9.80**	
	1a	**16.69**	**-152.97**	**-16.67**	
	1b	**9.78**	**32.23**	**-5.02**	
	1c	**21.31**	**218.08**	**-21.29**	
0.9D + 1.6W Normal	**1**	**-9.61**	**149.59**	**-19.53**	
	1a	**6.03**	**-100.76**	**-16.08**	
	1b	**-6.03**	**-100.76**	**-16.08**	
	1c	**9.61**	**149.59**	**-19.53**	
0.9D + 1.6W 45 deg	**1**	**-20.71**	**209.82**	**-20.69**	
	1a	**-9.19**	**24.09**	**-5.62**	
	1b	**-17.28**	**-160.99**	**-17.26**	
	1c	**-5.60**	**24.73**	**-9.21**	
0.9D + 1.6W 90 deg	**1**	**-19.53**	**149.14**	**-9.58**	
	1a	**-19.53**	**149.14**	**9.58**	
	1b	**-16.08**	**-100.31**	**-6.00**	
	1c	**-16.08**	**-100.31**	**6.00**	
0.9D + 1.6W 135 deg	**1**	**-9.19**	**24.09**	**5.62**	
	1a	**-20.71**	**209.82**	**20.69**	
	1b	**-5.60**	**24.73**	**9.21**	
	1c	**-17.28**	**-160.99**	**17.26**	

0.9D + 1.6W 180 deg	**1**	**6.03**	**-100.76**	**16.08**
	1a	**-9.61**	**149.59**	**19.53**
	1b	**9.61**	**149.59**	**19.53**
	1c	**-6.03**	**-100.76**	**16.08**
0.9D + 1.6W 225 deg	**1**	**17.28**	**-160.99**	**17.26**
	1a	**5.60**	**24.73**	**9.21**
	1b	**20.71**	**209.82**	**20.69**
	1c	**9.19**	**24.09**	**5.62**
0.9D + 1.6W 270 deg	**1**	**16.08**	**-100.31**	**6.00**
	1a	**16.08**	**-100.31**	**-6.00**
	1b	**19.53**	**149.14**	**9.58**
	1c	**19.53**	**149.14**	**-9.58**
0.9D + 1.6W 315 deg	**1**	**5.60**	**24.73**	**-9.21**
	1a	**17.28**	**-160.99**	**-17.26**
	1b	**9.19**	**24.09**	**-5.62**
	1c	**20.71**	**209.82**	**-20.69**
1.2D + 1.0Di + 1.0Wi Normal	**1**	**-8.31**	**121.71**	**-12.09**
	1a	**-2.65**	**31.21**	**-1.15**
	1b	**2.65**	**31.21**	**-1.15**
	1c	**8.31**	**121.71**	**-12.09**
1.2D + 1.0Di + 1.0Wi 45 deg	**1**	**-12.53**	**144.06**	**-12.52**
	1a	**-8.30**	**76.37**	**2.65**
	1b	**-1.59**	**8.86**	**-1.58**
	1c	**2.66**	**76.54**	**-8.31**
1.2D + 1.0Di + 1.0Wi 90 deg	**1**	**-12.09**	**121.59**	**-8.30**
	1a	**-12.09**	**121.59**	**8.30**
	1b	**-1.15**	**31.32**	**2.65**
	1c	**-1.15**	**31.32**	**-2.65**
1.2D + 1.0Di + 1.0Wi 135 deg	**1**	**-8.30**	**76.37**	**-2.65**
	1a	**-12.53**	**144.06**	**12.52**
	1b	**2.66**	**76.54**	**8.31**
	1c	**-1.59**	**8.86**	**1.58**
1.2D + 1.0Di + 1.0Wi 180 deg	**1**	**-2.65**	**31.21**	**1.15**
	1a	**-8.31**	**121.71**	**12.09**
	1b	**8.31**	**121.71**	**12.09**
	1c	**2.65**	**31.21**	**1.15**
1.2D + 1.0Di + 1.0Wi 225 deg	**1**	**1.59**	**8.86**	**1.58**
	1a	**-2.66**	**76.54**	**8.31**
	1b	**12.53**	**144.06**	**12.52**
	1c	**8.30**	**76.37**	**-2.65**
1.2D + 1.0Di + 1.0Wi 270 deg	**1**	**1.15**	**31.32**	**-2.65**
	1a	**1.15**	**31.32**	**2.65**
	1b	**12.09**	**121.59**	**8.30**
	1c	**12.09**	**121.59**	**-8.30**
1.2D + 1.0Di + 1.0Wi 315 deg	**1**	**-2.66**	**76.54**	**-8.31**
	1a	**1.59**	**8.86**	**-1.58**
	1b	**8.30**	**76.37**	**2.65**
	1c	**12.53**	**144.06**	**-12.52**
(1.2 + 0.2Sds) * DL + E Normal M1	**1**	**-3.51**	**48.77**	**-4.36**
	1a	**-1.44**	**15.70**	**0.59**
	1b	**1.44**	**15.70**	**0.59**
	1c	**3.51**	**48.77**	**-4.36**

(1.2 + 0.2Sds) * DL + E Normal M2	**1**	**-3.52**	**49.05**	**-4.20**
	1a	**-1.42**	**15.42**	**0.75**
	1b	**1.42**	**15.42**	**0.75**
	1c	**3.52**	**49.05**	**-4.20**
(1.2 + 0.2Sds) * DL + E 45 deg M1	**1**	**-4.54**	**55.62**	**-4.54**
	1a	**-3.08**	**32.24**	**1.87**
	1b	**0.41**	**8.85**	**0.41**
	1c	**1.87**	**32.24**	**-3.08**
(1.2 + 0.2Sds) * DL + E 45 deg M2	**1**	**-4.44**	**56.02**	**-4.44**
	1a	**-2.95**	**32.24**	**2.00**
	1b	**0.51**	**8.45**	**0.51**
	1c	**2.00**	**32.24**	**-2.95**
(1.2 + 0.2Sds) * DL + E 90 deg M1	**1**	**-4.36**	**48.77**	**-3.51**
	1a	**-4.36**	**48.77**	**3.51**
	1b	**0.59**	**15.70**	**1.44**
	1c	**0.59**	**15.70**	**-1.44**
(1.2 + 0.2Sds) * DL + E 90 deg M2	**1**	**-4.20**	**49.05**	**-3.52**
	1a	**-4.20**	**49.05**	**3.52**
	1b	**0.75**	**15.42**	**1.42**
	1c	**0.75**	**15.42**	**-1.42**
(1.2 + 0.2Sds) * DL + E 135 deg M1	**1**	**-3.08**	**32.24**	**-1.87**
	1a	**-4.54**	**55.62**	**4.54**
	1b	**1.87**	**32.24**	**3.08**
	1c	**0.41**	**8.85**	**-0.41**
(1.2 + 0.2Sds) * DL + E 135 deg M2	**1**	**-2.95**	**32.24**	**-2.00**
	1a	**-4.44**	**56.02**	**4.44**
	1b	**2.00**	**32.24**	**2.95**
	1c	**0.51**	**8.45**	**-0.51**
(1.2 + 0.2Sds) * DL + E 180 deg M1	**1**	**-1.44**	**15.70**	**-0.59**
	1a	**-3.51**	**48.77**	**4.36**
	1b	**3.51**	**48.77**	**4.36**
	1c	**1.44**	**15.70**	**-0.59**
(1.2 + 0.2Sds) * DL + E 180 deg M2	**1**	**-1.42**	**15.42**	**-0.75**
	1a	**-3.52**	**49.05**	**4.20**
	1b	**3.52**	**49.05**	**4.20**
	1c	**1.42**	**15.42**	**-0.75**
(1.2 + 0.2Sds) * DL + E 225 deg M1	**1**	**-0.41**	**8.85**	**-0.41**
	1a	**-1.87**	**32.24**	**3.08**
	1b	**4.54**	**55.62**	**4.54**
	1c	**3.08**	**32.24**	**-1.87**
(1.2 + 0.2Sds) * DL + E 225 deg M2	**1**	**-0.51**	**8.45**	**-0.51**
	1a	**-2.00**	**32.24**	**2.95**
	1b	**4.44**	**56.02**	**4.44**
	1c	**2.95**	**32.24**	**-2.00**
(1.2 + 0.2Sds) * DL + E 270 deg M1	**1**	**-0.59**	**15.70**	**-1.44**
	1a	**-0.59**	**15.70**	**1.44**
	1b	**4.36**	**48.77**	**3.51**
	1c	**4.36**	**48.77**	**-3.51**
(1.2 + 0.2Sds) * DL + E 270 deg M2	**1**	**-0.75**	**15.42**	**-1.42**
	1a	**-0.75**	**15.42**	**1.42**
	1b	**4.20**	**49.05**	**3.52**
	1c	**4.20**	**49.05**	**-3.52**
(1.2 + 0.2Sds) * DL + E 315 deg M1	**1**	**-1.87**	**32.24**	**-3.08**

	1a	-0.41	8.85	0.41
	1b	3.08	32.24	1.87
	1c	4.54	55.62	-4.54
(1.2 + 0.2Sds) * DL + E 315 deg M2	1	-2.00	32.24	-2.95
	1a	-0.51	8.45	0.51
	1b	2.95	32.24	2.00
	1c	4.44	56.02	-4.44
(0.9 - 0.2Sds) * DL + E Normal M1	1	-2.73	38.62	-3.58
	1a	-0.66	5.58	-0.19
	1b	0.66	5.58	-0.19
	1c	2.73	38.62	-3.58
(0.9 - 0.2Sds) * DL + E Normal M2	1	-2.75	38.90	-3.42
	1a	-0.65	5.30	-0.03
	1b	0.65	5.30	-0.03
	1c	2.75	38.90	-3.42
(0.9 - 0.2Sds) * DL + E 45 deg M1	1	-3.76	45.46	-3.76
	1a	-2.30	22.10	1.09
	1b	-0.37	-1.26	-0.37
	1c	1.09	22.10	-2.30
(0.9 - 0.2Sds) * DL + E 45 deg M2	1	-3.66	45.86	-3.66
	1a	-2.17	22.10	1.22
	1b	-0.27	-1.66	-0.27
	1c	1.22	22.10	-2.17
(0.9 - 0.2Sds) * DL + E 90 deg M1	1	-3.58	38.62	-2.73
	1a	-3.58	38.62	2.73
	1b	-0.19	5.58	0.66
	1c	-0.19	5.58	-0.66
(0.9 - 0.2Sds) * DL + E 90 deg M2	1	-3.42	38.90	-2.75
	1a	-3.42	38.90	2.75
	1b	-0.03	5.30	0.65
	1c	-0.03	5.30	-0.65
(0.9 - 0.2Sds) * DL + E 135 deg M1	1	-2.30	22.10	-1.09
	1a	-3.76	45.46	3.76
	1b	1.09	22.10	2.30
	1c	-0.37	-1.26	0.37
(0.9 - 0.2Sds) * DL + E 135 deg M2	1	-2.17	22.10	-1.22
	1a	-3.66	45.86	3.66
	1b	1.22	22.10	2.17
	1c	-0.27	-1.66	0.27
(0.9 - 0.2Sds) * DL + E 180 deg M1	1	-0.66	5.58	0.19
	1a	-2.73	38.62	3.58
	1b	2.73	38.62	3.58
	1c	0.66	5.58	0.19
(0.9 - 0.2Sds) * DL + E 180 deg M2	1	-0.65	5.30	0.03
	1a	-2.75	38.90	3.42
	1b	2.75	38.90	3.42
	1c	0.65	5.30	0.03
(0.9 - 0.2Sds) * DL + E 225 deg M1	1	0.37	-1.26	0.37
	1a	-1.09	22.10	2.30
	1b	3.76	45.46	3.76
	1c	2.30	22.10	-1.09
(0.9 - 0.2Sds) * DL + E 225 deg M2	1	0.27	-1.66	0.27
	1a	-1.22	22.10	2.17

	1b	3.66	45.86	3.66
	1c	2.17	22.10	-1.22
(0.9 - 0.2Sds) * DL + E 270 deg M1	1	0.19	5.58	-0.66
	1a	0.19	5.58	0.66
	1b	3.58	38.62	2.73
	1c	3.58	38.62	-2.73
(0.9 - 0.2Sds) * DL + E 270 deg M2	1	0.03	5.30	-0.65
	1a	0.03	5.30	0.65
	1b	3.42	38.90	2.75
	1c	3.42	38.90	-2.75
(0.9 - 0.2Sds) * DL + E 315 deg M1	1	-1.09	22.10	-2.30
	1a	0.37	-1.26	-0.37
	1b	2.30	22.10	1.09
	1c	3.76	45.46	-3.76
(0.9 - 0.2Sds) * DL + E 315 deg M2	1	-1.22	22.10	-2.17
	1a	0.27	-1.66	-0.27
	1b	2.17	22.10	1.22
	1c	3.66	45.86	-3.66
1.0D + 1.0W Service Normal	1	-4.16	61.94	-6.94
	1a	0.19	-7.68	-2.98
	1b	-0.19	-7.68	-2.98
	1c	4.16	61.94	-6.94
1.0D + 1.0W Service 45 deg	1	-7.27	78.68	-7.27
	1a	-4.05	27.04	-0.09
	1b	-3.31	-24.43	-3.31
	1c	-0.08	27.22	-4.06
1.0D + 1.0W Service 90 deg	1	-6.94	61.81	-4.15
	1a	-6.94	61.81	4.15
	1b	-2.98	-7.55	-0.18
	1c	-2.98	-7.55	0.18
1.0D + 1.0W Service 135 deg	1	-4.05	27.04	0.09
	1a	-7.27	78.68	7.27
	1b	-0.08	27.22	4.06
	1c	-3.31	-24.43	3.31
1.0D + 1.0W Service 180 deg	1	0.19	-7.68	2.98
	1a	-4.16	61.94	6.94
	1b	4.16	61.94	6.94
	1c	-0.19	-7.68	2.98
1.0D + 1.0W Service 225 deg	1	3.31	-24.43	3.31
	1a	0.08	27.22	4.06
	1b	7.27	78.68	7.27
	1c	4.05	27.04	0.09
1.0D + 1.0W Service 270 deg	1	2.98	-7.55	0.18
	1a	2.98	-7.55	-0.18
	1b	6.94	61.81	4.15
	1c	6.94	61.81	-4.15
1.0D + 1.0W Service 315 deg	1	0.08	27.22	-4.06
	1a	3.31	-24.43	-3.31
	1b	4.05	27.04	-0.09
	1c	7.27	78.68	-7.27

Site Number:	88014	Code:	ANSI/TIA-222-G	
Site Name:	New Fairfield, CT	Engineering Number:	OAA695532_C3_02	4/3/2017 3:38:16 PM
Customer:	AT&T MOBILITY			

Max Uplift:	160.99 (kip)	Moment Ice:	3,101.92 (kip-ft)	Moment:	8,513.04 (kip-ft)	1.2D + 1.6W 315 deg
Max Down:	218.08 (kip)	Total Down Ice:	305.83 (kip)	Total Down:	130.21 (kip)	
Max Shear:	30.13 (kip)	Total Shear Ice:	27.94 (kip)	Total Shear:	74.65 (kip)	

Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
90 mph Normal to Face with No Ice	50.00	0.041	-0.0693	0.0819	0.1072
90 mph Normal to Face with No Ice	75.00	0.081	0.1073	0.1139	0.1563
90 mph Normal to Face with No Ice	87.50	0.103	-0.1458	0.1097	0.1823
90 mph Normal to Face with No Ice	100.00	0.127	0.1885	0.1309	0.2293
90 mph Normal to Face with No Ice	112.50	0.154	-0.2318	0.1444	0.2729
90 mph Normal to Face with No Ice	137.50	0.218	0.3445	0.1741	0.3859
90 mph Normal to Face with No Ice	150.00	0.254	0.4147	0.2274	0.4724
90 mph Normal to Face with No Ice	160.17	0.284	-0.5039	0.1822	0.5356
90 mph Normal to Face with No Ice	170.33	0.315	0.5894	0.2852	0.6538
90 mph Normal to Face with No Ice	187.50	0.368	0.7455	0.6346	0.9778
90 mph 45 degree with No Ice	50.00	0.043	0.1121	0.0843	0.1399
90 mph 45 degree with No Ice	75.00	0.085	0.1712	0.1031	0.1998
90 mph 45 degree with No Ice	87.50	0.108	0.2300	0.1088	0.2544
90 mph 45 degree with No Ice	100.00	0.133	0.2960	0.1258	0.3216
90 mph 45 degree with No Ice	112.50	0.162	0.3625	0.1394	0.3884
90 mph 45 degree with No Ice	137.50	0.228	0.5346	0.1722	0.5617
90 mph 45 degree with No Ice	150.00	0.266	0.6401	0.1919	0.6683
90 mph 45 degree with No Ice	160.17	0.297	0.7741	0.1892	0.7969
90 mph 45 degree with No Ice	170.33	0.329	0.9019	0.2228	0.9290
90 mph 45 degree with No Ice	187.50	0.385	1.1330	0.5885	1.1949
90 mph 90 degree with No Ice	50.00	0.041	0.0792	0.0778	0.1110
90 mph 90 degree with No Ice	75.00	0.081	0.1193	0.0790	0.1431
90 mph 90 degree with No Ice	87.50	0.103	0.1585	0.0960	0.1853
90 mph 90 degree with No Ice	100.00	0.127	0.2030	0.1042	0.2282
90 mph 90 degree with No Ice	112.50	0.154	-0.2478	0.1153	0.2732
90 mph 90 degree with No Ice	137.50	0.217	0.3641	0.1457	0.3919
90 mph 90 degree with No Ice	150.00	0.252	0.4350	0.1049	0.4475
90 mph 90 degree with No Ice	160.17	0.282	0.5249	0.1709	0.5516
90 mph 90 degree with No Ice	170.33	0.312	0.6112	0.0692	0.6151
90 mph 90 degree with No Ice	187.50	0.364	-0.7680	0.2973	0.8213
90 mph 135 degree with No Ice	50.00	0.043	0.1047	0.0843	0.1399
90 mph 135 degree with No Ice	75.00	0.085	0.1599	0.1031	0.1998
90 mph 135 degree with No Ice	87.50	0.108	0.2147	0.1088	0.2544
90 mph 135 degree with No Ice	100.00	0.133	0.2762	0.1258	0.3216
90 mph 135 degree with No Ice	112.50	0.162	0.3381	0.1394	0.3884
90 mph 135 degree with No Ice	137.50	0.228	0.4985	0.1722	0.5617
90 mph 135 degree with No Ice	150.00	0.266	0.5969	0.1919	0.6683
90 mph 135 degree with No Ice	160.17	0.297	0.7217	0.1892	0.7969
90 mph 135 degree with No Ice	170.33	0.329	0.8407	0.2228	0.9290
90 mph 135 degree with No Ice	187.50	0.385	1.0557	0.5885	1.1949
90 mph 180 degree with No Ice	50.00	0.041	0.0693	0.0819	0.1072
90 mph 180 degree with No Ice	75.00	0.081	0.1073	0.1139	0.1563
90 mph 180 degree with No Ice	87.50	0.103	0.1458	0.1097	0.1823
90 mph 180 degree with No Ice	100.00	0.127	0.1885	0.1309	0.2293
90 mph 180 degree with No Ice	112.50	0.154	0.2318	0.1444	0.2729
90 mph 180 degree with No Ice	137.50	0.218	0.3445	0.1741	0.3859
90 mph 180 degree with No Ice	150.00	0.254	0.4147	0.2274	0.4724
90 mph 180 degree with No Ice	160.17	0.284	0.5039	0.1822	0.5356
90 mph 180 degree with No Ice	170.33	0.315	0.5894	0.2852	0.6538
90 mph 180 degree with No Ice	187.50	0.368	0.7455	0.6346	0.9778
90 mph 225 degree with No Ice	50.00	0.043	0.1121	0.0843	0.1399
90 mph 225 degree with No Ice	75.00	0.085	0.1712	0.1031	0.1998
90 mph 225 degree with No Ice	87.50	0.108	0.2300	0.1088	0.2544
90 mph 225 degree with No Ice	100.00	0.133	0.2960	0.1258	0.3216
90 mph 225 degree with No Ice	112.50	0.162	0.3625	0.1394	0.3884

90 mph 225 degree with No Ice	137.50	0.228	0.5346	0.1722	0.5617
90 mph 225 degree with No Ice	150.00	0.266	0.6401	0.1919	0.6683
90 mph 225 degree with No Ice	160.17	0.297	0.7741	0.1892	0.7969
90 mph 225 degree with No Ice	170.33	0.329	0.9019	0.2228	0.9290
90 mph 225 degree with No Ice	187.50	0.385	1.1330	0.5885	1.1949
90 mph 270 degree with No Ice	50.00	0.041	0.0792	0.0778	0.1110
90 mph 270 degree with No Ice	75.00	0.081	0.1193	0.0790	0.1431
90 mph 270 degree with No Ice	87.50	0.103	0.1585	0.0960	0.1853
90 mph 270 degree with No Ice	100.00	0.127	0.2030	0.1042	0.2282
90 mph 270 degree with No Ice	112.50	0.154	0.2478	0.1153	0.2732
90 mph 270 degree with No Ice	137.50	0.217	0.3641	0.1457	0.3919
90 mph 270 degree with No Ice	150.00	0.252	0.4350	0.1049	0.4475
90 mph 270 degree with No Ice	160.17	0.282	0.5249	0.1709	0.5516
90 mph 270 degree with No Ice	170.33	0.312	0.6112	0.0692	0.6151
90 mph 270 degree with No Ice	187.50	0.364	0.7680	0.2973	0.8213
90 mph 315 degree with No Ice	50.00	0.043	0.1047	0.0843	0.1399
90 mph 315 degree with No Ice	75.00	0.085	0.1599	0.1031	0.1998
90 mph 315 degree with No Ice	87.50	0.108	0.2147	0.1088	0.2544
90 mph 315 degree with No Ice	100.00	0.133	0.2762	0.1258	0.3216
90 mph 315 degree with No Ice	112.50	0.162	0.3381	0.1394	0.3884
90 mph 315 degree with No Ice	137.50	0.228	0.4985	0.1722	0.5617
90 mph 315 degree with No Ice	150.00	0.266	0.5969	0.1919	0.6683
90 mph 315 degree with No Ice	160.17	0.297	0.7217	0.1892	0.7969
90 mph 315 degree with No Ice	170.33	0.329	0.8407	0.2228	0.9290
90 mph 315 degree with No Ice	187.50	0.385	1.0557	0.5885	1.1949
90 mph Normal to Face with No Ice (Reduced DL)	50.00	0.041	0.0693	0.0817	0.1071
90 mph Normal to Face with No Ice (Reduced DL)	75.00	0.081	-0.1073	0.1137	0.1563
90 mph Normal to Face with No Ice (Reduced DL)	87.50	0.103	-0.1458	0.1095	0.1822
90 mph Normal to Face with No Ice (Reduced DL)	100.00	0.127	0.1885	0.1308	0.2292
90 mph Normal to Face with No Ice (Reduced DL)	112.50	0.154	0.2318	0.1443	0.2728
90 mph Normal to Face with No Ice (Reduced DL)	137.50	0.218	-0.3445	0.1739	0.3858
90 mph Normal to Face with No Ice (Reduced DL)	150.00	0.253	0.4147	0.2273	0.4723
90 mph Normal to Face with No Ice (Reduced DL)	160.17	0.283	-0.5039	0.1819	0.5355
90 mph Normal to Face with No Ice (Reduced DL)	170.33	0.314	0.5894	0.2849	0.6537
90 mph Normal to Face with No Ice (Reduced DL)	187.50	0.368	0.7455	0.6342	0.9775
90 mph 45 deg with No Ice (Reduced DL)	50.00	0.043	0.1121	0.0842	0.1398
90 mph 45 deg with No Ice (Reduced DL)	75.00	0.085	0.1711	0.1029	0.1997
90 mph 45 deg with No Ice (Reduced DL)	87.50	0.108	0.2300	0.1086	0.2543
90 mph 45 deg with No Ice (Reduced DL)	100.00	0.133	0.2960	0.1256	0.3215
90 mph 45 deg with No Ice (Reduced DL)	112.50	0.162	0.3625	0.1392	0.3883
90 mph 45 deg with No Ice (Reduced DL)	137.50	0.228	0.5346	0.1720	0.5616
90 mph 45 deg with No Ice (Reduced DL)	150.00	0.265	0.6401	0.1918	0.6682
90 mph 45 deg with No Ice (Reduced DL)	160.17	0.297	0.7740	0.1889	0.7968
90 mph 45 deg with No Ice (Reduced DL)	170.33	0.329	0.9019	0.2225	0.9289
90 mph 45 deg with No Ice (Reduced DL)	187.50	0.384	1.1330	0.5882	1.1947
90 mph 90 deg with No Ice (Reduced DL)	50.00	0.041	0.0792	0.0777	0.1109
90 mph 90 deg with No Ice (Reduced DL)	75.00	0.081	0.1193	0.0789	0.1431
90 mph 90 deg with No Ice (Reduced DL)	87.50	0.103	-0.1585	0.0958	0.1852
90 mph 90 deg with No Ice (Reduced DL)	100.00	0.127	0.2030	0.1040	0.2281
90 mph 90 deg with No Ice (Reduced DL)	112.50	0.154	-0.2478	0.1152	0.2732
90 mph 90 deg with No Ice (Reduced DL)	137.50	0.217	0.3640	0.1455	0.3918
90 mph 90 deg with No Ice (Reduced DL)	150.00	0.252	-0.4350	0.1047	0.4474
90 mph 90 deg with No Ice (Reduced DL)	160.17	0.281	0.5249	0.1706	0.5515
90 mph 90 deg with No Ice (Reduced DL)	170.33	0.312	-0.6111	0.0691	0.6150
90 mph 90 deg with No Ice (Reduced DL)	187.50	0.364	-0.7679	0.2977	0.8214
90 mph 135 deg with No Ice (Reduced DL)	50.00	0.043	0.1047	0.0842	0.1398
90 mph 135 deg with No Ice (Reduced DL)	75.00	0.085	0.1599	0.1029	0.1997
90 mph 135 deg with No Ice (Reduced DL)	87.50	0.108	0.2147	0.1086	0.2543
90 mph 135 deg with No Ice (Reduced DL)	100.00	0.133	0.2762	0.1256	0.3215
90 mph 135 deg with No Ice (Reduced DL)	112.50	0.162	0.3381	0.1392	0.3883
90 mph 135 deg with No Ice (Reduced DL)	137.50	0.228	0.4985	0.1720	0.5616
90 mph 135 deg with No Ice (Reduced DL)	150.00	0.265	0.5969	0.1918	0.6682

90 mph 135 deg with No Ice (Reduced DL)	160.17	0.297	0.7217	0.1889	0.7968
90 mph 135 deg with No Ice (Reduced DL)	170.33	0.329	0.8407	0.2225	0.9289
90 mph 135 deg with No Ice (Reduced DL)	187.50	0.384	1.0557	0.5882	1.1947
90 mph 180 deg with No Ice (Reduced DL)	50.00	0.041	0.0693	0.0817	0.1071
90 mph 180 deg with No Ice (Reduced DL)	75.00	0.081	0.1073	0.1137	0.1563
90 mph 180 deg with No Ice (Reduced DL)	87.50	0.103	0.1458	0.1095	0.1822
90 mph 180 deg with No Ice (Reduced DL)	100.00	0.127	0.1885	0.1308	0.2292
90 mph 180 deg with No Ice (Reduced DL)	112.50	0.154	0.2318	0.1443	0.2728
90 mph 180 deg with No Ice (Reduced DL)	137.50	0.218	0.3445	0.1739	0.3858
90 mph 180 deg with No Ice (Reduced DL)	150.00	0.253	0.4147	0.2273	0.4723
90 mph 180 deg with No Ice (Reduced DL)	160.17	0.283	0.5039	0.1819	0.5355
90 mph 180 deg with No Ice (Reduced DL)	170.33	0.314	0.5894	0.2849	0.6537
90 mph 180 deg with No Ice (Reduced DL)	187.50	0.368	0.7455	0.6342	0.9775
90 mph 225 deg with No Ice (Reduced DL)	50.00	0.043	0.1121	0.0842	0.1398
90 mph 225 deg with No Ice (Reduced DL)	75.00	0.085	0.1711	0.1029	0.1997
90 mph 225 deg with No Ice (Reduced DL)	87.50	0.108	0.2300	0.1086	0.2543
90 mph 225 deg with No Ice (Reduced DL)	100.00	0.133	0.2960	0.1256	0.3215
90 mph 225 deg with No Ice (Reduced DL)	112.50	0.162	0.3625	0.1392	0.3883
90 mph 225 deg with No Ice (Reduced DL)	137.50	0.228	0.5346	0.1720	0.5616
90 mph 225 deg with No Ice (Reduced DL)	150.00	0.265	0.6401	0.1918	0.6682
90 mph 225 deg with No Ice (Reduced DL)	160.17	0.297	0.7740	0.1889	0.7968
90 mph 225 deg with No Ice (Reduced DL)	170.33	0.329	0.9019	0.2225	0.9289
90 mph 225 deg with No Ice (Reduced DL)	187.50	0.384	1.1330	0.5882	1.1947
90 mph 270 deg with No Ice (Reduced DL)	50.00	0.041	0.0792	0.0777	0.1109
90 mph 270 deg with No Ice (Reduced DL)	75.00	0.081	0.1193	0.0789	0.1431
90 mph 270 deg with No Ice (Reduced DL)	87.50	0.103	0.1585	0.0958	0.1852
90 mph 270 deg with No Ice (Reduced DL)	100.00	0.127	0.2030	0.1040	0.2281
90 mph 270 deg with No Ice (Reduced DL)	112.50	0.154	0.2478	0.1152	0.2732
90 mph 270 deg with No Ice (Reduced DL)	137.50	0.217	0.3640	0.1455	0.3918
90 mph 270 deg with No Ice (Reduced DL)	150.00	0.252	0.4350	0.1047	0.4474
90 mph 270 deg with No Ice (Reduced DL)	160.17	0.281	0.5249	0.1706	0.5515
90 mph 270 deg with No Ice (Reduced DL)	170.33	0.312	0.6111	0.0691	0.6150
90 mph 270 deg with No Ice (Reduced DL)	187.50	0.364	0.7679	0.2977	0.8214
90 mph 315 deg with No Ice (Reduced DL)	50.00	0.043	0.1047	0.0842	0.1398
90 mph 315 deg with No Ice (Reduced DL)	75.00	0.085	0.1599	0.1029	0.1997
90 mph 315 deg with No Ice (Reduced DL)	87.50	0.108	0.2147	0.1086	0.2543
90 mph 315 deg with No Ice (Reduced DL)	100.00	0.133	0.2762	0.1256	0.3215
90 mph 315 deg with No Ice (Reduced DL)	112.50	0.162	0.3381	0.1392	0.3883
90 mph 315 deg with No Ice (Reduced DL)	137.50	0.228	0.4985	0.1720	0.5616
90 mph 315 deg with No Ice (Reduced DL)	150.00	0.265	0.5969	0.1918	0.6682
90 mph 315 deg with No Ice (Reduced DL)	160.17	0.297	0.7217	0.1889	0.7968
90 mph 315 deg with No Ice (Reduced DL)	170.33	0.329	0.8407	0.2225	0.9289
90 mph 315 deg with No Ice (Reduced DL)	187.50	0.384	1.0557	0.5882	1.1947
50 mph Normal with 0.75 in Radial Ice	50.00	0.018	0.0121	0.0302	0.0325
50 mph Normal with 0.75 in Radial Ice	75.00	0.032	-0.0191	0.0408	0.0450
50 mph Normal with 0.75 in Radial Ice	87.50	0.040	-0.0256	0.0373	0.0453
50 mph Normal with 0.75 in Radial Ice	100.00	0.048	0.0328	0.0441	0.0549
50 mph Normal with 0.75 in Radial Ice	112.50	0.057	-0.0403	0.0477	0.0625
50 mph Normal with 0.75 in Radial Ice	137.50	0.079	0.0609	0.0561	0.0828
50 mph Normal with 0.75 in Radial Ice	150.00	0.091	-0.0745	0.0674	0.1005
50 mph Normal with 0.75 in Radial Ice	160.17	0.100	0.0925	0.0570	0.1086
50 mph Normal with 0.75 in Radial Ice	170.33	0.110	-0.1104	0.0826	0.1379
50 mph Normal with 0.75 in Radial Ice	187.50	0.128	-0.1452	0.1685	0.2224
50 mph 45 deg with 0.75 in Radial Ice	50.00	0.020	0.0223	0.0321	0.0389
50 mph 45 deg with 0.75 in Radial Ice	75.00	0.035	0.0340	0.0383	0.0513
50 mph 45 deg with 0.75 in Radial Ice	87.50	0.043	0.0449	0.0390	0.0594
50 mph 45 deg with 0.75 in Radial Ice	100.00	0.051	0.0570	0.0445	0.0723
50 mph 45 deg with 0.75 in Radial Ice	112.50	0.061	0.0695	0.0483	0.0846
50 mph 45 deg with 0.75 in Radial Ice	137.50	0.084	0.1028	0.0576	0.1179
50 mph 45 deg with 0.75 in Radial Ice	150.00	0.096	0.1240	0.0606	0.1379
50 mph 45 deg with 0.75 in Radial Ice	160.17	0.106	0.1518	0.0611	0.1636
50 mph 45 deg with 0.75 in Radial Ice	170.33	0.117	0.1791	0.0670	0.1912

50 mph 45 deg with 0.75 in Radial Ice	187.50	0.135	0.2307	0.1519	0.2511
50 mph 90 deg with 0.75 in Radial Ice	50.00	0.018	0.0158	0.0304	0.0343
50 mph 90 deg with 0.75 in Radial Ice	75.00	0.032	0.0234	0.0305	0.0385
50 mph 90 deg with 0.75 in Radial Ice	87.50	0.040	0.0301	0.0359	0.0469
50 mph 90 deg with 0.75 in Radial Ice	100.00	0.048	0.0379	0.0390	0.0543
50 mph 90 deg with 0.75 in Radial Ice	112.50	0.057	-0.0459	0.0426	0.0626
50 mph 90 deg with 0.75 in Radial Ice	137.50	0.079	0.0675	0.0514	0.0849
50 mph 90 deg with 0.75 in Radial Ice	150.00	0.090	0.0813	0.0424	0.0917
50 mph 90 deg with 0.75 in Radial Ice	160.17	0.100	0.0994	0.0574	0.1147
50 mph 90 deg with 0.75 in Radial Ice	170.33	0.110	0.1176	0.0331	0.1221
50 mph 90 deg with 0.75 in Radial Ice	187.50	0.127	-0.1525	0.0578	0.1631
50 mph 135 deg with 0.75 in Radial Ice	50.00	0.020	0.0219	0.0321	0.0389
50 mph 135 deg with 0.75 in Radial Ice	75.00	0.035	0.0333	0.0383	0.0513
50 mph 135 deg with 0.75 in Radial Ice	87.50	0.043	0.0439	0.0390	0.0594
50 mph 135 deg with 0.75 in Radial Ice	100.00	0.051	0.0558	0.0445	0.0723
50 mph 135 deg with 0.75 in Radial Ice	112.50	0.061	0.0680	0.0483	0.0846
50 mph 135 deg with 0.75 in Radial Ice	137.50	0.084	0.1006	0.0576	0.1179
50 mph 135 deg with 0.75 in Radial Ice	150.00	0.096	0.1213	0.0606	0.1379
50 mph 135 deg with 0.75 in Radial Ice	160.17	0.106	0.1484	0.0611	0.1636
50 mph 135 deg with 0.75 in Radial Ice	170.33	0.117	0.1751	0.0670	0.1912
50 mph 135 deg with 0.75 in Radial Ice	187.50	0.135	0.2256	0.1519	0.2511
50 mph 180 deg with 0.75 in Radial Ice	50.00	0.018	0.0121	0.0302	0.0325
50 mph 180 deg with 0.75 in Radial Ice	75.00	0.032	0.0191	0.0408	0.0450
50 mph 180 deg with 0.75 in Radial Ice	87.50	0.040	0.0256	0.0373	0.0453
50 mph 180 deg with 0.75 in Radial Ice	100.00	0.048	0.0328	0.0441	0.0549
50 mph 180 deg with 0.75 in Radial Ice	112.50	0.057	0.0403	0.0477	0.0625
50 mph 180 deg with 0.75 in Radial Ice	137.50	0.079	0.0609	0.0561	0.0828
50 mph 180 deg with 0.75 in Radial Ice	150.00	0.091	0.0745	0.0674	0.1005
50 mph 180 deg with 0.75 in Radial Ice	160.17	0.100	0.0925	0.0570	0.1086
50 mph 180 deg with 0.75 in Radial Ice	170.33	0.110	0.1104	0.0826	0.1379
50 mph 180 deg with 0.75 in Radial Ice	187.50	0.128	0.1452	0.1685	0.2224
50 mph 225 deg with 0.75 in Radial Ice	50.00	0.020	0.0223	0.0321	0.0389
50 mph 225 deg with 0.75 in Radial Ice	75.00	0.035	0.0340	0.0383	0.0513
50 mph 225 deg with 0.75 in Radial Ice	87.50	0.043	0.0449	0.0390	0.0594
50 mph 225 deg with 0.75 in Radial Ice	100.00	0.051	0.0570	0.0445	0.0723
50 mph 225 deg with 0.75 in Radial Ice	112.50	0.061	0.0695	0.0483	0.0846
50 mph 225 deg with 0.75 in Radial Ice	137.50	0.084	0.1028	0.0576	0.1179
50 mph 225 deg with 0.75 in Radial Ice	150.00	0.096	0.1240	0.0606	0.1379
50 mph 225 deg with 0.75 in Radial Ice	160.17	0.106	0.1518	0.0611	0.1636
50 mph 225 deg with 0.75 in Radial Ice	170.33	0.117	0.1791	0.0670	0.1912
50 mph 225 deg with 0.75 in Radial Ice	187.50	0.135	0.2307	0.1519	0.2511
50 mph 270 deg with 0.75 in Radial Ice	50.00	0.018	0.0158	0.0304	0.0343
50 mph 270 deg with 0.75 in Radial Ice	75.00	0.032	0.0234	0.0305	0.0385
50 mph 270 deg with 0.75 in Radial Ice	87.50	0.040	0.0301	0.0359	0.0469
50 mph 270 deg with 0.75 in Radial Ice	100.00	0.048	0.0379	0.0390	0.0543
50 mph 270 deg with 0.75 in Radial Ice	112.50	0.057	0.0459	0.0426	0.0626
50 mph 270 deg with 0.75 in Radial Ice	137.50	0.079	0.0675	0.0514	0.0849
50 mph 270 deg with 0.75 in Radial Ice	150.00	0.090	0.0813	0.0424	0.0917
50 mph 270 deg with 0.75 in Radial Ice	160.17	0.100	0.0994	0.0574	0.1147
50 mph 270 deg with 0.75 in Radial Ice	170.33	0.110	0.1176	0.0331	0.1221
50 mph 270 deg with 0.75 in Radial Ice	187.50	0.127	0.1525	0.0578	0.1631
50 mph 315 deg with 0.75 in Radial Ice	50.00	0.020	0.0219	0.0321	0.0389
50 mph 315 deg with 0.75 in Radial Ice	75.00	0.035	0.0333	0.0383	0.0513
50 mph 315 deg with 0.75 in Radial Ice	87.50	0.043	0.0439	0.0390	0.0594
50 mph 315 deg with 0.75 in Radial Ice	100.00	0.051	0.0558	0.0445	0.0723
50 mph 315 deg with 0.75 in Radial Ice	112.50	0.061	0.0680	0.0483	0.0846
50 mph 315 deg with 0.75 in Radial Ice	137.50	0.084	0.1006	0.0576	0.1179
50 mph 315 deg with 0.75 in Radial Ice	150.00	0.096	0.1213	0.0606	0.1379
50 mph 315 deg with 0.75 in Radial Ice	160.17	0.106	0.1484	0.0611	0.1636
50 mph 315 deg with 0.75 in Radial Ice	170.33	0.117	0.1751	0.0670	0.1912
50 mph 315 deg with 0.75 in Radial Ice	187.50	0.135	0.2256	0.1519	0.2511
Seismic Normal M1	50.00	0.005	0.0006	0.0103	0.0104

Seismic Normal M1	75.00	0.010	0.0008	0.0136	0.0137
Seismic Normal M1	87.50	0.013	0.0010	0.0155	0.0155
Seismic Normal M1	100.00	0.017	0.0011	0.0180	0.0181
Seismic Normal M1	112.50	0.021	0.0012	0.0201	0.0201
Seismic Normal M1	137.50	0.031	0.0016	0.0255	0.0255
Seismic Normal M1	150.00	0.037	0.0017	0.0274	0.0274
Seismic Normal M1	160.17	0.042	0.0018	0.0294	0.0295
Seismic Normal M1	170.33	0.047	0.0019	0.0304	0.0305
Seismic Normal M1	187.50	0.056	0.0019	0.0316	0.0317
Seismic Normal M2	50.00	0.004	0.0006	0.0098	0.0098
Seismic Normal M2	75.00	0.009	0.0009	0.0138	0.0138
Seismic Normal M2	87.50	0.013	0.0010	0.0165	0.0165
Seismic Normal M2	100.00	0.016	0.0012	0.0196	0.0196
Seismic Normal M2	112.50	0.021	0.0014	0.0225	0.0225
Seismic Normal M2	137.50	0.032	0.0019	0.0300	0.0300
Seismic Normal M2	150.00	0.039	0.0021	0.0333	0.0333
Seismic Normal M2	160.17	0.046	0.0023	0.0368	0.0369
Seismic Normal M2	170.33	0.052	0.0024	0.0386	0.0387
Seismic Normal M2	187.50	0.064	0.0025	0.0407	0.0408
Seismic 45 deg M1	50.00	0.005	0.0009	0.0104	0.0104
Seismic 45 deg M1	75.00	0.010	0.0012	0.0137	0.0137
Seismic 45 deg M1	87.50	0.013	0.0014	0.0155	0.0155
Seismic 45 deg M1	100.00	0.017	0.0016	0.0182	0.0182
Seismic 45 deg M1	112.50	0.021	0.0018	0.0202	0.0202
Seismic 45 deg M1	137.50	0.031	0.0022	0.0256	0.0256
Seismic 45 deg M1	150.00	0.037	0.0024	0.0276	0.0276
Seismic 45 deg M1	160.17	0.042	0.0026	0.0296	0.0296
Seismic 45 deg M1	170.33	0.047	0.0027	0.0305	0.0305
Seismic 45 deg M1	187.50	0.056	0.0027	0.0318	0.0318
Seismic 45 deg M2	50.00	0.004	0.0008	0.0098	0.0098
Seismic 45 deg M2	75.00	0.009	0.0012	0.0138	0.0138
Seismic 45 deg M2	87.50	0.013	0.0014	0.0165	0.0165
Seismic 45 deg M2	100.00	0.016	0.0017	0.0197	0.0197
Seismic 45 deg M2	112.50	0.021	0.0020	0.0225	0.0225
Seismic 45 deg M2	137.50	0.032	0.0026	0.0301	0.0301
Seismic 45 deg M2	150.00	0.039	0.0029	0.0336	0.0336
Seismic 45 deg M2	160.17	0.046	0.0032	0.0369	0.0369
Seismic 45 deg M2	170.33	0.052	0.0034	0.0386	0.0386
Seismic 45 deg M2	187.50	0.064	0.0035	0.0409	0.0409
Seismic 90 deg M1	50.00	0.005	0.0006	0.0103	0.0104
Seismic 90 deg M1	75.00	0.010	0.0008	0.0136	0.0137
Seismic 90 deg M1	87.50	0.013	0.0010	0.0155	0.0155
Seismic 90 deg M1	100.00	0.017	0.0011	0.0180	0.0181
Seismic 90 deg M1	112.50	0.021	0.0012	0.0201	0.0201
Seismic 90 deg M1	137.50	0.031	0.0016	0.0255	0.0255
Seismic 90 deg M1	150.00	0.037	0.0017	0.0274	0.0274
Seismic 90 deg M1	160.17	0.042	0.0018	0.0294	0.0295
Seismic 90 deg M1	170.33	0.047	0.0019	0.0304	0.0305
Seismic 90 deg M1	187.50	0.056	0.0019	0.0316	0.0317
Seismic 90 deg M2	50.00	0.004	0.0006	0.0098	0.0098
Seismic 90 deg M2	75.00	0.009	0.0009	0.0138	0.0138
Seismic 90 deg M2	87.50	0.013	0.0010	0.0165	0.0165
Seismic 90 deg M2	100.00	0.016	0.0012	0.0196	0.0196
Seismic 90 deg M2	112.50	0.021	0.0014	0.0225	0.0225
Seismic 90 deg M2	137.50	0.032	0.0019	0.0300	0.0300
Seismic 90 deg M2	150.00	0.039	0.0021	0.0333	0.0333
Seismic 90 deg M2	160.17	0.046	0.0023	0.0368	0.0369
Seismic 90 deg M2	170.33	0.052	0.0024	0.0386	0.0387
Seismic 90 deg M2	187.50	0.064	0.0025	0.0407	0.0408
Seismic 135 deg M1	50.00	0.005	-0.0009	0.0104	0.0104
Seismic 135 deg M1	75.00	0.010	0.0012	0.0137	0.0137
Seismic 135 deg M1	87.50	0.013	0.0014	0.0155	0.0155

Seismic 135 deg M1	100.00	0.017	0.0016	0.0182	0.0182
Seismic 135 deg M1	112.50	0.021	0.0018	0.0202	0.0202
Seismic 135 deg M1	137.50	0.031	-0.0022	0.0256	0.0256
Seismic 135 deg M1	150.00	0.037	0.0024	0.0276	0.0276
Seismic 135 deg M1	160.17	0.042	-0.0026	0.0296	0.0296
Seismic 135 deg M1	170.33	0.047	-0.0027	0.0305	0.0305
Seismic 135 deg M1	187.50	0.056	0.0027	0.0318	0.0318
Seismic 135 deg M2	50.00	0.004	0.0008	0.0098	0.0098
Seismic 135 deg M2	75.00	0.009	0.0012	0.0138	0.0138
Seismic 135 deg M2	87.50	0.013	-0.0014	0.0165	0.0165
Seismic 135 deg M2	100.00	0.016	0.0017	0.0197	0.0197
Seismic 135 deg M2	112.50	0.021	-0.0020	0.0225	0.0225
Seismic 135 deg M2	137.50	0.032	0.0026	0.0301	0.0301
Seismic 135 deg M2	150.00	0.039	-0.0029	0.0336	0.0336
Seismic 135 deg M2	160.17	0.046	-0.0032	0.0369	0.0369
Seismic 135 deg M2	170.33	0.052	0.0034	0.0386	0.0386
Seismic 135 deg M2	187.50	0.064	0.0035	0.0409	0.0409
Seismic 180 deg M1	50.00	0.005	-0.0006	0.0103	0.0104
Seismic 180 deg M1	75.00	0.010	0.0008	0.0136	0.0137
Seismic 180 deg M1	87.50	0.013	-0.0010	0.0155	0.0155
Seismic 180 deg M1	100.00	0.017	-0.0011	0.0180	0.0181
Seismic 180 deg M1	112.50	0.021	-0.0012	0.0201	0.0201
Seismic 180 deg M1	137.50	0.031	0.0016	0.0255	0.0255
Seismic 180 deg M1	150.00	0.037	0.0017	0.0274	0.0274
Seismic 180 deg M1	160.17	0.042	-0.0018	0.0294	0.0295
Seismic 180 deg M1	170.33	0.047	0.0019	0.0304	0.0305
Seismic 180 deg M1	187.50	0.056	-0.0019	0.0316	0.0317
Seismic 180 deg M2	50.00	0.004	-0.0006	0.0098	0.0098
Seismic 180 deg M2	75.00	0.009	-0.0009	0.0138	0.0138
Seismic 180 deg M2	87.50	0.013	-0.0010	0.0165	0.0165
Seismic 180 deg M2	100.00	0.016	0.0012	0.0196	0.0196
Seismic 180 deg M2	112.50	0.021	0.0014	0.0225	0.0225
Seismic 180 deg M2	137.50	0.032	-0.0019	0.0300	0.0300
Seismic 180 deg M2	150.00	0.039	-0.0021	0.0333	0.0333
Seismic 180 deg M2	160.17	0.046	0.0023	0.0368	0.0369
Seismic 180 deg M2	170.33	0.052	0.0024	0.0386	0.0387
Seismic 180 deg M2	187.50	0.064	-0.0025	0.0407	0.0408
Seismic 225 deg M1	50.00	0.005	0.0009	0.0104	0.0104
Seismic 225 deg M1	75.00	0.010	0.0012	0.0137	0.0137
Seismic 225 deg M1	87.50	0.013	0.0014	0.0155	0.0155
Seismic 225 deg M1	100.00	0.017	0.0016	0.0182	0.0182
Seismic 225 deg M1	112.50	0.021	0.0018	0.0202	0.0202
Seismic 225 deg M1	137.50	0.031	0.0022	0.0256	0.0256
Seismic 225 deg M1	150.00	0.037	0.0024	0.0276	0.0276
Seismic 225 deg M1	160.17	0.042	0.0026	0.0296	0.0296
Seismic 225 deg M1	170.33	0.047	0.0027	0.0305	0.0305
Seismic 225 deg M1	187.50	0.056	0.0027	0.0318	0.0318
Seismic 225 deg M2	50.00	0.004	0.0008	0.0098	0.0098
Seismic 225 deg M2	75.00	0.009	0.0012	0.0138	0.0138
Seismic 225 deg M2	87.50	0.013	0.0014	0.0165	0.0165
Seismic 225 deg M2	100.00	0.016	0.0017	0.0197	0.0197
Seismic 225 deg M2	112.50	0.021	0.0020	0.0225	0.0225
Seismic 225 deg M2	137.50	0.032	0.0026	0.0301	0.0301
Seismic 225 deg M2	150.00	0.039	0.0029	0.0336	0.0336
Seismic 225 deg M2	160.17	0.046	0.0032	0.0369	0.0369
Seismic 225 deg M2	170.33	0.052	0.0034	0.0386	0.0386
Seismic 225 deg M2	187.50	0.064	0.0035	0.0409	0.0409
Seismic 270 deg M1	50.00	0.005	0.0006	0.0103	0.0104
Seismic 270 deg M1	75.00	0.010	0.0008	0.0136	0.0137
Seismic 270 deg M1	87.50	0.013	0.0010	0.0155	0.0155
Seismic 270 deg M1	100.00	0.017	0.0011	0.0180	0.0181
Seismic 270 deg M1	112.50	0.021	0.0012	0.0201	0.0201

Seismic 270 deg M1	137.50	0.031	0.0016	0.0255	0.0255
Seismic 270 deg M1	150.00	0.037	0.0017	0.0274	0.0274
Seismic 270 deg M1	160.17	0.042	0.0018	0.0294	0.0295
Seismic 270 deg M1	170.33	0.047	0.0019	0.0304	0.0305
Seismic 270 deg M1	187.50	0.056	0.0019	0.0316	0.0317
Seismic 270 deg M2	50.00	0.004	0.0006	0.0098	0.0098
Seismic 270 deg M2	75.00	0.009	0.0009	0.0138	0.0138
Seismic 270 deg M2	87.50	0.013	0.0010	0.0165	0.0165
Seismic 270 deg M2	100.00	0.016	0.0012	0.0196	0.0196
Seismic 270 deg M2	112.50	0.021	0.0014	0.0225	0.0225
Seismic 270 deg M2	137.50	0.032	0.0019	0.0300	0.0300
Seismic 270 deg M2	150.00	0.039	0.0021	0.0333	0.0333
Seismic 270 deg M2	160.17	0.046	0.0023	0.0368	0.0369
Seismic 270 deg M2	170.33	0.052	0.0024	0.0386	0.0387
Seismic 270 deg M2	187.50	0.064	0.0025	0.0407	0.0408
Seismic 315 deg M1	50.00	0.005	0.0009	0.0104	0.0104
Seismic 315 deg M1	75.00	0.010	0.0012	0.0137	0.0137
Seismic 315 deg M1	87.50	0.013	0.0014	0.0155	0.0155
Seismic 315 deg M1	100.00	0.017	0.0016	0.0182	0.0182
Seismic 315 deg M1	112.50	0.021	0.0018	0.0202	0.0202
Seismic 315 deg M1	137.50	0.031	0.0022	0.0256	0.0256
Seismic 315 deg M1	150.00	0.037	0.0024	0.0276	0.0276
Seismic 315 deg M1	160.17	0.042	0.0026	0.0296	0.0296
Seismic 315 deg M1	170.33	0.047	0.0027	0.0305	0.0305
Seismic 315 deg M1	187.50	0.056	0.0027	0.0318	0.0318
Seismic 315 deg M2	50.00	0.004	0.0008	0.0098	0.0098
Seismic 315 deg M2	75.00	0.009	0.0012	0.0138	0.0138
Seismic 315 deg M2	87.50	0.013	0.0014	0.0165	0.0165
Seismic 315 deg M2	100.00	0.016	0.0017	0.0197	0.0197
Seismic 315 deg M2	112.50	0.021	0.0020	0.0225	0.0225
Seismic 315 deg M2	137.50	0.032	0.0026	0.0301	0.0301
Seismic 315 deg M2	150.00	0.039	0.0029	0.0336	0.0336
Seismic 315 deg M2	160.17	0.046	0.0032	0.0369	0.0369
Seismic 315 deg M2	170.33	0.052	0.0034	0.0386	0.0386
Seismic 315 deg M2	187.50	0.064	0.0035	0.0409	0.0409
Seismic (Reduced DL) Normal M1	50.00	0.005	0.0006	0.0102	0.0102
Seismic (Reduced DL) Normal M1	75.00	0.010	0.0008	0.0136	0.0136
Seismic (Reduced DL) Normal M1	87.50	0.013	0.0010	0.0154	0.0154
Seismic (Reduced DL) Normal M1	100.00	0.017	0.0011	0.0179	0.0179
Seismic (Reduced DL) Normal M1	112.50	0.021	0.0012	0.0200	0.0200
Seismic (Reduced DL) Normal M1	137.50	0.031	0.0016	0.0254	0.0254
Seismic (Reduced DL) Normal M1	150.00	0.036	0.0017	0.0273	0.0273
Seismic (Reduced DL) Normal M1	160.17	0.042	0.0018	0.0293	0.0293
Seismic (Reduced DL) Normal M1	170.33	0.047	0.0019	0.0303	0.0303
Seismic (Reduced DL) Normal M1	187.50	0.056	0.0019	0.0313	0.0314
Seismic (Reduced DL) Normal M2	50.00	0.004	0.0006	0.0097	0.0097
Seismic (Reduced DL) Normal M2	75.00	0.009	0.0009	0.0137	0.0138
Seismic (Reduced DL) Normal M2	87.50	0.013	0.0010	0.0164	0.0164
Seismic (Reduced DL) Normal M2	100.00	0.016	0.0012	0.0195	0.0195
Seismic (Reduced DL) Normal M2	112.50	0.021	0.0014	0.0223	0.0224
Seismic (Reduced DL) Normal M2	137.50	0.032	0.0019	0.0299	0.0299
Seismic (Reduced DL) Normal M2	150.00	0.039	0.0021	0.0332	0.0332
Seismic (Reduced DL) Normal M2	160.17	0.046	0.0023	0.0366	0.0367
Seismic (Reduced DL) Normal M2	170.33	0.052	0.0024	0.0384	0.0385
Seismic (Reduced DL) Normal M2	187.50	0.064	0.0025	0.0405	0.0405
Seismic (Reduced DL) 45 deg M1	50.00	0.005	0.0009	0.0102	0.0102
Seismic (Reduced DL) 45 deg M1	75.00	0.010	0.0012	0.0136	0.0136
Seismic (Reduced DL) 45 deg M1	87.50	0.013	0.0014	0.0154	0.0154
Seismic (Reduced DL) 45 deg M1	100.00	0.017	0.0016	0.0180	0.0180
Seismic (Reduced DL) 45 deg M1	112.50	0.021	0.0018	0.0200	0.0200
Seismic (Reduced DL) 45 deg M1	137.50	0.031	0.0022	0.0254	0.0254
Seismic (Reduced DL) 45 deg M1	150.00	0.037	0.0024	0.0275	0.0275

Seismic (Reduced DL) 45 deg M1	160.17	0.042	0.0026	0.0294	0.0294
Seismic (Reduced DL) 45 deg M1	170.33	0.047	0.0027	0.0303	0.0303
Seismic (Reduced DL) 45 deg M1	187.50	0.056	0.0027	0.0315	0.0315
Seismic (Reduced DL) 45 deg M2	50.00	0.004	0.0008	0.0097	0.0097
Seismic (Reduced DL) 45 deg M2	75.00	0.009	0.0012	0.0137	0.0138
Seismic (Reduced DL) 45 deg M2	87.50	0.013	0.0014	0.0164	0.0164
Seismic (Reduced DL) 45 deg M2	100.00	0.016	0.0017	0.0195	0.0195
Seismic (Reduced DL) 45 deg M2	112.50	0.021	0.0020	0.0224	0.0224
Seismic (Reduced DL) 45 deg M2	137.50	0.032	0.0026	0.0299	0.0299
Seismic (Reduced DL) 45 deg M2	150.00	0.039	0.0029	0.0335	0.0335
Seismic (Reduced DL) 45 deg M2	160.17	0.046	0.0032	0.0367	0.0367
Seismic (Reduced DL) 45 deg M2	170.33	0.052	0.0034	0.0384	0.0385
Seismic (Reduced DL) 45 deg M2	187.50	0.064	0.0035	0.0406	0.0406
Seismic (Reduced DL) 90 deg M1	50.00	0.005	0.0006	0.0102	0.0102
Seismic (Reduced DL) 90 deg M1	75.00	0.010	0.0008	0.0136	0.0136
Seismic (Reduced DL) 90 deg M1	87.50	0.013	0.0010	0.0154	0.0154
Seismic (Reduced DL) 90 deg M1	100.00	0.017	0.0011	0.0179	0.0179
Seismic (Reduced DL) 90 deg M1	112.50	0.021	0.0012	0.0200	0.0200
Seismic (Reduced DL) 90 deg M1	137.50	0.031	0.0016	0.0254	0.0254
Seismic (Reduced DL) 90 deg M1	150.00	0.036	0.0017	0.0273	0.0273
Seismic (Reduced DL) 90 deg M1	160.17	0.042	0.0018	0.0293	0.0293
Seismic (Reduced DL) 90 deg M1	170.33	0.047	0.0019	0.0303	0.0303
Seismic (Reduced DL) 90 deg M1	187.50	0.056	0.0019	0.0313	0.0314
Seismic (Reduced DL) 90 deg M2	50.00	0.004	0.0006	0.0097	0.0097
Seismic (Reduced DL) 90 deg M2	75.00	0.009	0.0009	0.0137	0.0138
Seismic (Reduced DL) 90 deg M2	87.50	0.013	0.0010	0.0164	0.0164
Seismic (Reduced DL) 90 deg M2	100.00	0.016	0.0012	0.0195	0.0195
Seismic (Reduced DL) 90 deg M2	112.50	0.021	0.0014	0.0223	0.0224
Seismic (Reduced DL) 90 deg M2	137.50	0.032	0.0019	0.0299	0.0299
Seismic (Reduced DL) 90 deg M2	150.00	0.039	0.0021	0.0332	0.0332
Seismic (Reduced DL) 90 deg M2	160.17	0.046	0.0023	0.0366	0.0367
Seismic (Reduced DL) 90 deg M2	170.33	0.052	0.0024	0.0384	0.0385
Seismic (Reduced DL) 90 deg M2	187.50	0.064	0.0025	0.0405	0.0405
Seismic (Reduced DL) 135 deg M1	50.00	0.005	-0.0009	0.0102	0.0102
Seismic (Reduced DL) 135 deg M1	75.00	0.010	0.0012	0.0136	0.0136
Seismic (Reduced DL) 135 deg M1	87.50	0.013	0.0014	0.0154	0.0154
Seismic (Reduced DL) 135 deg M1	100.00	0.017	-0.0016	0.0180	0.0180
Seismic (Reduced DL) 135 deg M1	112.50	0.021	0.0018	0.0200	0.0200
Seismic (Reduced DL) 135 deg M1	137.50	0.031	0.0022	0.0254	0.0254
Seismic (Reduced DL) 135 deg M1	150.00	0.037	0.0024	0.0275	0.0275
Seismic (Reduced DL) 135 deg M1	160.17	0.042	0.0026	0.0294	0.0294
Seismic (Reduced DL) 135 deg M1	170.33	0.047	-0.0027	0.0303	0.0303
Seismic (Reduced DL) 135 deg M1	187.50	0.056	-0.0027	0.0315	0.0315
Seismic (Reduced DL) 135 deg M2	50.00	0.004	0.0008	0.0097	0.0097
Seismic (Reduced DL) 135 deg M2	75.00	0.009	0.0012	0.0137	0.0138
Seismic (Reduced DL) 135 deg M2	87.50	0.013	0.0014	0.0164	0.0164
Seismic (Reduced DL) 135 deg M2	100.00	0.016	-0.0017	0.0195	0.0195
Seismic (Reduced DL) 135 deg M2	112.50	0.021	0.0020	0.0224	0.0224
Seismic (Reduced DL) 135 deg M2	137.50	0.032	-0.0026	0.0299	0.0299
Seismic (Reduced DL) 135 deg M2	150.00	0.039	-0.0029	0.0335	0.0335
Seismic (Reduced DL) 135 deg M2	160.17	0.046	-0.0032	0.0367	0.0367
Seismic (Reduced DL) 135 deg M2	170.33	0.052	-0.0034	0.0384	0.0385
Seismic (Reduced DL) 135 deg M2	187.50	0.064	0.0035	0.0406	0.0406
Seismic (Reduced DL) 180 deg M1	50.00	0.005	0.0006	0.0102	0.0102
Seismic (Reduced DL) 180 deg M1	75.00	0.010	-0.0008	0.0136	0.0136
Seismic (Reduced DL) 180 deg M1	87.50	0.013	-0.0010	0.0154	0.0154
Seismic (Reduced DL) 180 deg M1	100.00	0.017	0.0011	0.0179	0.0179
Seismic (Reduced DL) 180 deg M1	112.50	0.021	0.0012	0.0200	0.0200
Seismic (Reduced DL) 180 deg M1	137.50	0.031	0.0016	0.0254	0.0254
Seismic (Reduced DL) 180 deg M1	150.00	0.036	-0.0017	0.0273	0.0273
Seismic (Reduced DL) 180 deg M1	160.17	0.042	-0.0018	0.0293	0.0293
Seismic (Reduced DL) 180 deg M1	170.33	0.047	-0.0019	0.0303	0.0303

Seismic (Reduced DL) 180 deg M1	187.50	0.056	-0.0019	0.0313	0.0314
Seismic (Reduced DL) 180 deg M2	50.00	0.004	0.0006	0.0097	0.0097
Seismic (Reduced DL) 180 deg M2	75.00	0.009	-0.0009	0.0137	0.0138
Seismic (Reduced DL) 180 deg M2	87.50	0.013	0.0010	0.0164	0.0164
Seismic (Reduced DL) 180 deg M2	100.00	0.016	0.0012	0.0195	0.0195
Seismic (Reduced DL) 180 deg M2	112.50	0.021	0.0014	0.0223	0.0224
Seismic (Reduced DL) 180 deg M2	137.50	0.032	0.0019	0.0299	0.0299
Seismic (Reduced DL) 180 deg M2	150.00	0.039	-0.0021	0.0332	0.0332
Seismic (Reduced DL) 180 deg M2	160.17	0.046	0.0023	0.0366	0.0367
Seismic (Reduced DL) 180 deg M2	170.33	0.052	-0.0024	0.0384	0.0385
Seismic (Reduced DL) 180 deg M2	187.50	0.064	0.0025	0.0405	0.0405
Seismic (Reduced DL) 225 deg M1	50.00	0.005	0.0009	0.0102	0.0102
Seismic (Reduced DL) 225 deg M1	75.00	0.010	0.0012	0.0136	0.0136
Seismic (Reduced DL) 225 deg M1	87.50	0.013	0.0014	0.0154	0.0154
Seismic (Reduced DL) 225 deg M1	100.00	0.017	0.0016	0.0180	0.0180
Seismic (Reduced DL) 225 deg M1	112.50	0.021	0.0018	0.0200	0.0200
Seismic (Reduced DL) 225 deg M1	137.50	0.031	0.0022	0.0254	0.0254
Seismic (Reduced DL) 225 deg M1	150.00	0.037	0.0024	0.0275	0.0275
Seismic (Reduced DL) 225 deg M1	160.17	0.042	0.0026	0.0294	0.0294
Seismic (Reduced DL) 225 deg M1	170.33	0.047	0.0027	0.0303	0.0303
Seismic (Reduced DL) 225 deg M1	187.50	0.056	0.0027	0.0315	0.0315
Seismic (Reduced DL) 225 deg M2	50.00	0.004	0.0008	0.0097	0.0097
Seismic (Reduced DL) 225 deg M2	75.00	0.009	0.0012	0.0137	0.0138
Seismic (Reduced DL) 225 deg M2	87.50	0.013	0.0014	0.0164	0.0164
Seismic (Reduced DL) 225 deg M2	100.00	0.016	0.0017	0.0195	0.0195
Seismic (Reduced DL) 225 deg M2	112.50	0.021	0.0020	0.0224	0.0224
Seismic (Reduced DL) 225 deg M2	137.50	0.032	0.0026	0.0299	0.0299
Seismic (Reduced DL) 225 deg M2	150.00	0.039	0.0029	0.0335	0.0335
Seismic (Reduced DL) 225 deg M2	160.17	0.046	0.0032	0.0367	0.0367
Seismic (Reduced DL) 225 deg M2	170.33	0.052	0.0034	0.0384	0.0385
Seismic (Reduced DL) 225 deg M2	187.50	0.064	0.0035	0.0406	0.0406
Seismic (Reduced DL) 270 deg M1	50.00	0.005	0.0006	0.0102	0.0102
Seismic (Reduced DL) 270 deg M1	75.00	0.010	0.0008	0.0136	0.0136
Seismic (Reduced DL) 270 deg M1	87.50	0.013	0.0010	0.0154	0.0154
Seismic (Reduced DL) 270 deg M1	100.00	0.017	0.0011	0.0179	0.0179
Seismic (Reduced DL) 270 deg M1	112.50	0.021	0.0012	0.0200	0.0200
Seismic (Reduced DL) 270 deg M1	137.50	0.031	0.0016	0.0254	0.0254
Seismic (Reduced DL) 270 deg M1	150.00	0.036	0.0017	0.0273	0.0273
Seismic (Reduced DL) 270 deg M1	160.17	0.042	0.0018	0.0293	0.0293
Seismic (Reduced DL) 270 deg M1	170.33	0.047	0.0019	0.0303	0.0303
Seismic (Reduced DL) 270 deg M1	187.50	0.056	0.0019	0.0313	0.0314
Seismic (Reduced DL) 270 deg M2	50.00	0.004	0.0006	0.0097	0.0097
Seismic (Reduced DL) 270 deg M2	75.00	0.009	0.0009	0.0137	0.0138
Seismic (Reduced DL) 270 deg M2	87.50	0.013	0.0010	0.0164	0.0164
Seismic (Reduced DL) 270 deg M2	100.00	0.016	0.0012	0.0195	0.0195
Seismic (Reduced DL) 270 deg M2	112.50	0.021	0.0014	0.0223	0.0224
Seismic (Reduced DL) 270 deg M2	137.50	0.032	0.0019	0.0299	0.0299
Seismic (Reduced DL) 270 deg M2	150.00	0.039	0.0021	0.0332	0.0332
Seismic (Reduced DL) 270 deg M2	160.17	0.046	0.0023	0.0366	0.0367
Seismic (Reduced DL) 270 deg M2	170.33	0.052	0.0024	0.0384	0.0385
Seismic (Reduced DL) 270 deg M2	187.50	0.064	0.0025	0.0405	0.0405
Seismic (Reduced DL) 315 deg M1	50.00	0.005	0.0009	0.0102	0.0102
Seismic (Reduced DL) 315 deg M1	75.00	0.010	0.0012	0.0136	0.0136
Seismic (Reduced DL) 315 deg M1	87.50	0.013	0.0014	0.0154	0.0154
Seismic (Reduced DL) 315 deg M1	100.00	0.017	0.0016	0.0180	0.0180
Seismic (Reduced DL) 315 deg M1	112.50	0.021	0.0018	0.0200	0.0200
Seismic (Reduced DL) 315 deg M1	137.50	0.031	0.0022	0.0254	0.0254
Seismic (Reduced DL) 315 deg M1	150.00	0.037	0.0024	0.0275	0.0275
Seismic (Reduced DL) 315 deg M1	160.17	0.042	0.0026	0.0294	0.0294
Seismic (Reduced DL) 315 deg M1	170.33	0.047	0.0027	0.0303	0.0303
Seismic (Reduced DL) 315 deg M1	187.50	0.056	0.0027	0.0315	0.0315
Seismic (Reduced DL) 315 deg M2	50.00	0.004	0.0008	0.0097	0.0097

Seismic (Reduced DL) 315 deg M2	75.00	0.009	0.0012	0.0137	0.0138
Seismic (Reduced DL) 315 deg M2	87.50	0.013	0.0014	0.0164	0.0164
Seismic (Reduced DL) 315 deg M2	100.00	0.016	0.0017	0.0195	0.0195
Seismic (Reduced DL) 315 deg M2	112.50	0.021	0.0020	0.0224	0.0224
Seismic (Reduced DL) 315 deg M2	137.50	0.032	0.0026	0.0299	0.0299
Seismic (Reduced DL) 315 deg M2	150.00	0.039	0.0029	0.0335	0.0335
Seismic (Reduced DL) 315 deg M2	160.17	0.046	0.0032	0.0367	0.0367
Seismic (Reduced DL) 315 deg M2	170.33	0.052	0.0034	0.0384	0.0385
Seismic (Reduced DL) 315 deg M2	187.50	0.064	0.0035	0.0406	0.0406
Serviceability - 60 mph Wind Normal	50.00	0.011	0.0134	0.0225	0.0262
Serviceability - 60 mph Wind Normal	75.00	0.023	-0.0210	0.0311	0.0375
Serviceability - 60 mph Wind Normal	87.50	0.029	-0.0285	0.0298	0.0412
Serviceability - 60 mph Wind Normal	100.00	0.035	-0.0369	0.0354	0.0512
Serviceability - 60 mph Wind Normal	112.50	0.043	0.0457	0.0389	0.0600
Serviceability - 60 mph Wind Normal	137.50	0.061	0.0696	0.0466	0.0837
Serviceability - 60 mph Wind Normal	150.00	0.070	0.0852	0.0609	0.1047
Serviceability - 60 mph Wind Normal	160.17	0.079	-0.1053	0.0481	0.1157
Serviceability - 60 mph Wind Normal	170.33	0.087	-0.1254	0.0765	0.1469
Serviceability - 60 mph Wind Normal	187.50	0.102	-0.1645	0.1726	0.2383
Serviceability - 60 mph Wind 45 deg	50.00	0.012	0.0239	0.0234	0.0334
Serviceability - 60 mph Wind 45 deg	75.00	0.024	0.0365	0.0286	0.0464
Serviceability - 60 mph Wind 45 deg	87.50	0.030	0.0489	0.0302	0.0574
Serviceability - 60 mph Wind 45 deg	100.00	0.037	0.0628	0.0347	0.0718
Serviceability - 60 mph Wind 45 deg	112.50	0.045	0.0772	0.0383	0.0862
Serviceability - 60 mph Wind 45 deg	137.50	0.063	0.1155	0.0471	0.1247
Serviceability - 60 mph Wind 45 deg	150.00	0.074	0.1398	0.0516	0.1490
Serviceability - 60 mph Wind 45 deg	160.17	0.083	0.1709	0.0513	0.1784
Serviceability - 60 mph Wind 45 deg	170.33	0.091	0.2015	0.0591	0.2100
Serviceability - 60 mph Wind 45 deg	187.50	0.107	0.2593	0.1629	0.2780
Serviceability - 60 mph Wind 90 deg	50.00	0.011	0.0162	0.0221	0.0274
Serviceability - 60 mph Wind 90 deg	75.00	0.023	-0.0243	0.0226	0.0332
Serviceability - 60 mph Wind 90 deg	87.50	0.029	0.0320	0.0275	0.0422
Serviceability - 60 mph Wind 90 deg	100.00	0.035	0.0410	0.0299	0.0507
Serviceability - 60 mph Wind 90 deg	112.50	0.043	0.0501	0.0331	0.0601
Serviceability - 60 mph Wind 90 deg	137.50	0.060	-0.0750	0.0418	0.0858
Serviceability - 60 mph Wind 90 deg	150.00	0.070	0.0908	0.0306	0.0959
Serviceability - 60 mph Wind 90 deg	160.17	0.078	-0.1112	0.0488	0.1214
Serviceability - 60 mph Wind 90 deg	170.33	0.087	-0.1315	0.0208	0.1331
Serviceability - 60 mph Wind 90 deg	187.50	0.101	-0.1707	0.0777	0.1874
Serviceability - 60 mph Wind 135 deg	50.00	0.012	0.0235	0.0234	0.0334
Serviceability - 60 mph Wind 135 deg	75.00	0.024	0.0358	0.0286	0.0464
Serviceability - 60 mph Wind 135 deg	87.50	0.030	0.0480	0.0302	0.0574
Serviceability - 60 mph Wind 135 deg	100.00	0.037	0.0617	0.0347	0.0718
Serviceability - 60 mph Wind 135 deg	112.50	0.045	0.0758	0.0383	0.0862
Serviceability - 60 mph Wind 135 deg	137.50	0.063	0.1134	0.0471	0.1247
Serviceability - 60 mph Wind 135 deg	150.00	0.074	0.1372	0.0516	0.1490
Serviceability - 60 mph Wind 135 deg	160.17	0.083	0.1677	0.0513	0.1784
Serviceability - 60 mph Wind 135 deg	170.33	0.091	0.1977	0.0591	0.2100
Serviceability - 60 mph Wind 135 deg	187.50	0.107	0.2544	0.1629	0.2780
Serviceability - 60 mph Wind 180 deg	50.00	0.011	0.0134	0.0225	0.0262
Serviceability - 60 mph Wind 180 deg	75.00	0.023	0.0210	0.0311	0.0375
Serviceability - 60 mph Wind 180 deg	87.50	0.029	0.0285	0.0298	0.0412
Serviceability - 60 mph Wind 180 deg	100.00	0.035	0.0369	0.0354	0.0512
Serviceability - 60 mph Wind 180 deg	112.50	0.043	0.0457	0.0389	0.0600
Serviceability - 60 mph Wind 180 deg	137.50	0.061	0.0696	0.0466	0.0837
Serviceability - 60 mph Wind 180 deg	150.00	0.070	0.0852	0.0609	0.1047
Serviceability - 60 mph Wind 180 deg	160.17	0.079	0.1053	0.0481	0.1157
Serviceability - 60 mph Wind 180 deg	170.33	0.087	0.1254	0.0765	0.1469
Serviceability - 60 mph Wind 180 deg	187.50	0.102	0.1645	0.1726	0.2383
Serviceability - 60 mph Wind 225 deg	50.00	0.012	0.0239	0.0234	0.0334
Serviceability - 60 mph Wind 225 deg	75.00	0.024	0.0365	0.0286	0.0464
Serviceability - 60 mph Wind 225 deg	87.50	0.030	0.0489	0.0302	0.0574

Serviceability - 60 mph Wind 225 deg	100.00	0.037	0.0628	0.0347	0.0718
Serviceability - 60 mph Wind 225 deg	112.50	0.045	0.0772	0.0383	0.0862
Serviceability - 60 mph Wind 225 deg	137.50	0.063	0.1155	0.0471	0.1247
Serviceability - 60 mph Wind 225 deg	150.00	0.074	0.1398	0.0516	0.1490
Serviceability - 60 mph Wind 225 deg	160.17	0.083	0.1709	0.0513	0.1784
Serviceability - 60 mph Wind 225 deg	170.33	0.091	0.2015	0.0591	0.2100
Serviceability - 60 mph Wind 225 deg	187.50	0.107	0.2593	0.1629	0.2780
Serviceability - 60 mph Wind 270 deg	50.00	0.011	0.0162	0.0221	0.0274
Serviceability - 60 mph Wind 270 deg	75.00	0.023	0.0243	0.0226	0.0332
Serviceability - 60 mph Wind 270 deg	87.50	0.029	0.0320	0.0275	0.0422
Serviceability - 60 mph Wind 270 deg	100.00	0.035	0.0410	0.0299	0.0507
Serviceability - 60 mph Wind 270 deg	112.50	0.043	0.0501	0.0331	0.0601
Serviceability - 60 mph Wind 270 deg	137.50	0.060	0.0750	0.0418	0.0858
Serviceability - 60 mph Wind 270 deg	150.00	0.070	0.0908	0.0306	0.0959
Serviceability - 60 mph Wind 270 deg	160.17	0.078	0.1112	0.0488	0.1214
Serviceability - 60 mph Wind 270 deg	170.33	0.087	0.1315	0.0208	0.1331
Serviceability - 60 mph Wind 270 deg	187.50	0.101	0.1707	0.0777	0.1874
Serviceability - 60 mph Wind 315 deg	50.00	0.012	0.0235	0.0234	0.0334
Serviceability - 60 mph Wind 315 deg	75.00	0.024	0.0358	0.0286	0.0464
Serviceability - 60 mph Wind 315 deg	87.50	0.030	0.0480	0.0302	0.0574
Serviceability - 60 mph Wind 315 deg	100.00	0.037	0.0617	0.0347	0.0718
Serviceability - 60 mph Wind 315 deg	112.50	0.045	0.0758	0.0383	0.0862
Serviceability - 60 mph Wind 315 deg	137.50	0.063	0.1134	0.0471	0.1247
Serviceability - 60 mph Wind 315 deg	150.00	0.074	0.1372	0.0516	0.1490
Serviceability - 60 mph Wind 315 deg	160.17	0.083	0.1677	0.0513	0.1784
Serviceability - 60 mph Wind 315 deg	170.33	0.091	0.1977	0.0591	0.2100
Serviceability - 60 mph Wind 315 deg	187.50	0.107	0.2544	0.1629	0.2780

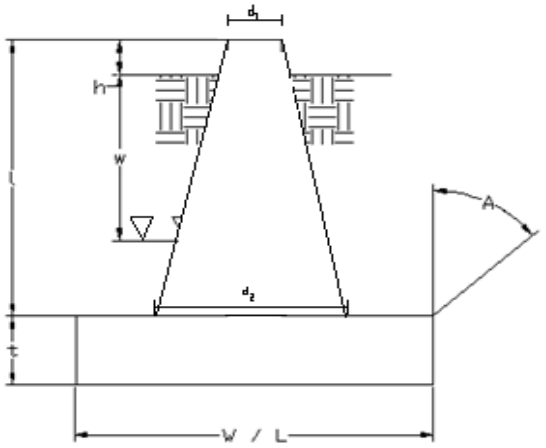
Site Name:	New Fairfield, CT	*Program Last Updated: 9/27/2016*
Site Number:	88014	*American Tower Corporation*
Engineering Number:	OAA695532	
Engineer:	Aaron.Black	
Date:	04/03/17	

Foundation

Design Loads (Factored)

Compression/Leg:	218.08	k
Uplift/Leg:	160.99	k

Face Width @ Top of Pier (d_1):	3.58	ft
Face Width @ Bottom of Pier (d_2):	6.00	ft
Total Length of Pier (l):	6.50	ft
Height of Pedestal Above Ground (h):	0.63	ft
Width of Pad (W):	16.00	ft
Length of Pad (L):	16.00	ft
Thickness of Pad (t):	3.00	ft
Water Table Depth (w):	99.00	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Soil (Above Water Table):	120.0	pcf
Unit Weight of Soil (Below Water Table):	55.0	pcf
Friction Angle of Uplift (A):	22	°
Ultimate Compressive Bearing Pressure:	4500	psf
Ultimate Skin Friction:	0	psf



Volume Pier (Total):	152.40	ft³
Volume Pad (Total):	768.00	ft³
Volume Soil (Total):	1841.06	ft³
Volume Pier (Buoyant):	0.00	ft³
Volume Pad (Buoyant):	0.00	ft³
Volume Soil (Buoyant):	0.00	ft³
Weight Pier:	22.86	k
Weight Pad:	115.20	k
Weight Soil:	220.93	k

Ultimate Skin Friction:	0.00	k
Difference in Soil Volume	572.10	ft³
Difference in Soil Volume	84.83	ft³
Difference in Soil Weight:	78.83	k

Uplift Check

ϕs Uplift Resistance	Ratio	Result
269.24	0.60	**OK**

Axial Check

ϕs Axial Resistance	Ratio	Result
864.00	0.25	**OK**

Radio Frequency Emissions Analysis Report

AT&T Existing Facility

Site ID: CT5534

New Fairfield SW
16 Titicus Mountain Road
New Fairfield, CT 6812

April 3, 2017

Centerline Communications Project Number: 950005-047

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**6.95 %**

April 3, 2017

AT&T Mobility – New England
Attn: John Benedetto, RF Manager
550 Cochituate Road
Suite 550 – 13&14
Framingham, MA 06040

Emissions Analysis for Site: **CT5534 – New Fairfield SW**

Centerline Communications, LLC ("Centerline") was directed to analyze the proposed AT&T facility located at **16 Titicus Mountain Road, New Fairfield, CT**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 700 and 850 MHz Bands are approximately 467 $\mu W/cm^2$ and 567 $\mu W/cm^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were performed for the proposed AT&T Wireless antenna facility located at **16 Titicus Mountain Road, New Fairfield, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
UMTS	850 MHz	2	30
UMTS	1900 MHz (PCS)	2	30
GSM	850 MHz	2	30
LTE	700 MHz	2	60
LTE	1900 MHz (PCS)	2	60

Table 1: Channel Data Table

The following antennas listed in *Table 2* were used in the modeling for transmission in the 700 MHz, 850 MHz and 1900 MHz (PCS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Powerwave 7770	160
A	2	CCI HPA-65R-BUU-H6	160
B	1	Powerwave 7770	160
B	2	CCI HPA-65R-BUU-H6	160
C	1	Powerwave 7770	160
C	2	CCI HPA-65R-BUU-H6	160

Table 2: Antenna Data

All calculations were done with respect to uncontrolled / general population threshold limits.

RESULTS

Per the calculations completed for the proposed AT&T configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	Powerwave 7770	850 MHz / 1900 MHz (PCS)	11.4 / 13.4	6	180	2,969.12	0.64
Antenna A2	CCI HPA-65R-BUU-H6	700 MHz / 1900 MHz (PCS)	11.95 / 14.75	4	240	5,462.56	1.15
						Sector A Composite MPE%	**1.80**
Antenna B1	Powerwave 7770	850 MHz / 1900 MHz (PCS)	11.4 / 13.4	6	180	2,969.12	0.64
Antenna B2	CCI HPA-65R-BUU-H6	700 MHz / 1900 MHz (PCS)	11.95 / 14.75	4	240	5,462.56	1.15
						Sector B Composite MPE%	**1.80**
Antenna C1	Powerwave 7770	850 MHz / 1900 MHz (PCS)	11.4 / 13.4	6	180	2,969.12	0.64
Antenna C2	CCI HPA-65R-BUU-H6	700 MHz / 1900 MHz (PCS)	11.95 / 14.75	4	240	5,462.56	1.15
						Sector C Composite MPE%	**1.80**

Table 3: AT&T Emissions Levels

The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum AT&T MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each AT&T Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	**MPE%**
AT&T – Max Sector Value	**1.80 %**
Sprint	0.58 %
Clearwire	0.06 %
T-Mobile	1.15 %
Verizon Wireless	1.92 %
Dept Homeland Security - ICE	1.44 %
Site Total MPE %:	**6.95 %**

Table 4: All Carrier MPE Contributions

AT&T Sector A Total:	1.80 %
AT&T Sector B Total:	1.80 %
AT&T Sector C Total:	1.80 %
Site Total:	6.95 %

Table 5: Site MPE Summary

FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated AT&T sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

AT&T _ Max Values per Frequency Band / Technology (All Sectors)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
AT&T 850 MHz UMTS	2	414.12	160	1.26	850 MHz	567	0.22%
AT&T 1900 MHz (PCS) UMTS	2	656.33	160	1.99	1900 MHz (PCS)	1000	0.20%
AT&T 850 MHz GSM	2	414.12	160	1.26	850 MHz	567	0.22%
AT&T 700 MHz LTE	2	940.05	160	2.85	700 MHz	467	0.61%
AT&T 1900 MHz (PCS) LTE	2	1,791.23	160	5.43	1900 MHz (PCS)	1000	0.54%
						Total:	**1.80%**

Table 6: AT&T Maximum Sector MPE Power Values

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector A:	1.80 %
Sector B:	1.80 %
Sector C:	1.80 %
AT&T Maximum Total (per sector):	1.80 %
Site Total:	6.95 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **6.95 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Scott Heffernan
RF Engineering Director
Centerline Communications, LLC
95 Ryan Drive, Suite 1
Raynham, MA 02767